UkrOboronProm
Ukrainian Defence Industry

Military and special purpose vehicles

Catalogue 2018

SPETS TECHNO EXPORT

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About the company

The State Foreign Trade Enterprise “SpetsTechnoExport” is one of the biggest exporting companies, part of the SC “Ukroboronprom”, specializes in foreign economic activities for export and import of modern armament, military equipment and technologies, as well as special purpose products. SFTE “SpetsTechnoExport” works closely with Ukrainian enterprises, research centers, design bureaus, public and private companies from over 30 countries across the globe.`

Since 1998 the Company gained a reputation of a reliable and predictable partner, specializing in commercial support, trade facilitation and R&D financing.

More information at: www.spetstechnoexport.com

MILITARY AND SPECIAL PURPOSE VEHICLES

PRECISION GUIDED WEAPONS, SMALL ARMS, LIGHT WEAPONS AND SELF-PROTECTION EQUIPMENT

RADAR LOCATION AND AIR DEFENCE

AIRCRAFT ENGINEERING AND MAINTENANCE

SHIPBUILDING INDUSTRY

UNMANNED AERIAL VEHICLES AND ANTI-UAV DEFENCE SYSTEMS

Vladyslav Belbas

Acting Director of the State Foreign Trade Enterprise «SpetsTechnoExport»

Dear Ladies and Gentlemen

Since 1998 our Company has been focused on providing our esteemed customers with state-of-the-art combat proven solutions for their greater benefit.

Our long-term viability is built on technical and industrial decisions that take a pragmatic, yet audacious approach, in line with today's ethical, social and environmental imperatives. As a vital part of a strategic and high-value-added Ukrainian defence industry, SFTE SpetsTechnoExport helps to meet ever-changing market needs by finding best technological solutions with help of outstanding companies, laboratories and scientific schools. We deploy expertise built on the skills and experience of our people, and shared with a number of partners around the world.

Our mission is to create a significant contribution to the strengthening of Ukraine's defense capability and the revival of economic, industrial and scientific potential by expanding the presence of the Ukrainian defense industry in the world market, providing comprehensive solutions to ensure safety of partners, based on technological advance and a deep understanding and forecasting of clients' needs as well as tendencies in the global security environment.

Our vision is to be the driving force and the centre of innovations development for the defence industry of Ukraine through the development of global competencies and provision of world-class solutions to meet the complex security needs of partner countries.

Our Values:

- Do What's Right for your Nation
- Respect your Partners
- Perform With Excellence

We are opened for any kind of cooperation with our potential partners and ready to share our best experience and achievements.

MILITARY AND SPECIAL PURPOSE VEHICLES

UKROBORONPROM
Ukrainian Defence Industry

WE DO:

- ORGANIZATION OF PRODUCTION AND SUPPLY OF
  - HEAVY AND LIGHT ARMORED VEHICLES
  - UNMANNED GROUND VEHICLES
  - ARMAMENT SYSTEMS
  - ENGINES, UNITS AND AGGREGATES
- OVERALL MANAGEMENT OF REPAIR AND UPGRADE
- MAINTENANCE AND TRAININGS
- TECHNOLOGY TRANSFER

SPETS TECHNO EXPORT

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Production

Oplot

MAIN BATTLE TANK

Main battle tank «Oplot» is intended for combat operations in offensive operations and defence, day and night, in different climate and road conditions, as well as in water and during using of weapons of mass distraction by enemy.

DIMENSIONS:
9720X4176X2800

CREW:
3

WEIGHT:
51 T

ENGINE:
DIESEL ENGINE 6TD-2

MAXIMUM SPEED:
70 KM/H

Armament:

Gun	KBA-3
Caliber	125 mm
Coaxial machine gun	KT-7,62
Caliber	7,62 mm
Anti-aircraft machine gun	KT-12,7
Caliber	12,7 mm

Oplot can be almost unnoticeable at battlefield:
- smokeless mode of engine start
- making of smoke curtain
- motor-transmission section has heat insulating cover, which decrease thermal visibility
- anti-radar coverage of the tank
- rubber shields on the front part of the turret
- protective nets set

Panoramic and thermal imaging sight.
Satellite navigation works using the Glonas and Navstar systems. Communication facilities provide control at the distance up to 50 km, with additional antenna – up to 350 km.

- Tank turret rotate on 180 deg by 5 sec.
- 125mm gun has: armour-piercing, cumulative and high-explosive fragmentation shells

New combined armour with several layer of armoured plates and ceramic material, mounted dynamic protection "Nizh"type – exceeds armour of competitors.

Special difference of Ukrainian tank "Oplot" has:
- powerful two – stroke diesel engine 6TD-2 (1200 hp, 883 kW);
- combined system for moving control;
- digital board for driver-mechanic;
- dynamic protection of new generation;
- improved level of tank side security;
- sight of commander;
- up-to-date aiming and observation devices;
- ability to fire with guided missile through barrel;
- automatic loading mechanism;
- anti-aircraft machine gun of closed type.

It is important, that tank for export can be equipped with:
- pipe 120 mm caliber;
- communication system (communication facilities) of customer;
- Air-conditioner;
- additional power generator;
- camouflage modifications.

T-64BM BULAT

MAIN BATTLE TANK

The Bulat BM main battle tank is an upgrade of the T-64B. The purpose of upgrade is the significant enhancement of the tank specifications.

It is intended to be used to support troops during the fight, overcome deeply echeloned battle enemy order, overcome water obstacles and swamps, rapid counteraction the enemy counter-offensive and perform other tasks.

DIMENSIONS:
9295X3560X2184

CREW:
3

WEIGHT:
45 T

ENGINE:
DIESEL ENGINE 6TD-2

MAXIMUM SPEED:
70 KM/H

Armament:

Gun	KBA-3 or 2A46M-1
Caliber	125 mm
Coaxial machine gun	KT-7,62 or PKT
Caliber	7,62 mm
Anti-aircraft machine gun	KT-12,7 or NSVT-12,7
Caliber	12,7 mm

The modernization is carried out in three main directions:

firepower (modernization of weaponry , fire control system in order to enhance firepower efficiency)

higher protection level (due to vulnerability reduction from modern anti-tank means)

improved mobility performance (due to engine compartment upgrading)

In order to enhance the mobility the power unit of higher power capacity is installed in the engine transmission compartment. The 850 horsepower 5TDFM Engine, being a deeply modified 5TDF Engine version after conduction of power increase measures, is to be used as a new power unit.

Upgrade + Overhaul

T-84 YATAGAN

MAIN BATTLE TANK

Designed for support of military troops on the battle field, to overcome layered defence of an enemy, water obstacles and swamped areas, quick reaction for counterstrike of an enemy and carrying out other missions.

DIMENSIONS:
9720X3775X2285

CREW:
3

WEIGHT:
48,5 T

ENGINE:
1200 H/P

MAXIMUM SPEED:
70 KM/H

Armament:

Gun	120 mm
Coaxial machine gun	7,62 mm
Anti-aircraft machine gun	12,7 mm

T-64B (BV)

MAIN BATTLE TANK

T-64B (BV) Main Battle Tank is an upgraded version of T-64A tank. Essentially new constructive solutions were implemented in T-64b (BV) Tank

DIMENSIONS:
9225X3600X2172

CREW:
3

WEIGHT:
39 - 42,5 T.

ENGINE:
5TDFM

MAXIMUM SPEED:
60,5 KM/H

Armament:

Gun	KBA-3 or 2A46M-1
Caliber	125 mm
Coaxial machine gun	KT-7,62 or PKT
Caliber	7,62 mm
Anti-aircraft machine gun	KT-12,7 or NSVT-12,7
Caliber	12,7 mm

Upgrade + Overhaul

T-72AG

UPGRADED TANK

T-72AG tank is combat tracked vehicle, which has powerful missile-artillery armaments, reliable armored protection and high maneuverability. It is intended to accomplish wide scope of tasks and is capable to defeat tanks and other armored objects of enemy, manpower, anti-tank and artillery means etc.

DIMENSIONS:
9500X3600X2226

CREW:
3

WEIGHT:
49.5 T

ENGINE:
6TD-2, DIESEL, 1200 HP

MAXIMUM SPEED:
70 KM/H

Armament:	
Gun	2A46M, with thermal cover
Caliber	125 mm
Guided missile	9M119
Coaxial machine gun	PKT
Caliber	12,7 mm
Anti-aircraft gun	NSV-12,7
Caliber	12,7 mm

T-72-120

UPGRADED TANK

The main offensive power of land forces, intended for combat actions in case of direct fire contact with an enemy.

DIMENSIONS:
9225X3600X2172

CREW:
3

WEIGHT:
39 - 42,5 T.

ENGINE:
5TDFM

MAXIMUM SPEED:
60,5 KM/H

Armament:	
Gun	120 mm
Coaxial machine gun	7,62 mm
Anti-aircraft machine gun	12,7 mm

Upgrade + Overhaul

T-72 M1

TANK WITH CONTROLLED WEAPON COMPLEX

The tank is fitted with a modern fire control system and guided weapon system, which ensure increase in fire power due to the installation of guided weapon system that provides firing a guided missile, semi-automatic and manual loader of a “Kombat” guided missile, armament control drive with electro-hydraulic elevation drive and electro-machine traverse drive, which leads to the decrease in fire hazard in the tank, infra-red spotlight withimproved characteristics, for increase in the night-time target detection range, thermal sleeves on a main gun barrel to reduce its bend, that occurs due to non-uniform heating when firing frequently, 12.7mm NSV anti-aircraft machine gun with manual control from the tank commander.

DIMENSIONS:
9225X3600X2172

CREW:
3

WEIGHT:
39 - 42,5 T

ENGINE:
5TDFM

MAXIMUM SPEED:
60,5 KM/H

Armament:

Gun	2A46M, with thermal cover
Caliber	125 mm
Guided missile	9M119
Coaxial machine gun	PKT
Caliber	12,7 mm
Anti-aircraft gun	NSV-12,7
Caliber	12,7 mm

Upgrade + Overhaul

T-55AGM

UPGRADED TANK

Designed for support of military troops on the battle field, to overcome layered defence of an enemy, water obstacles and swamped areas, quick reaction for counterstrike of an enemy and carrying out other missions.

DIMENSIONS:
9853X3560X3004

CREW:
3

WEIGHT:
46 T

ENGINE CAPACITY:
850, 1000 HP

MAXIMUM SPEED:
70 KM/H

Armament:

Gun	125 mm
Coaxial machine gun	7,62 mm
Anti-aircraft machine gun	12,7 mm

T-55AMV

UPGRADED TANK

Designed to accomplish combat missions in offensive and defensive actions, as a mass efficient means of active military operations on land in conventional and nuclear war conditions.

DIMENSIONS:
9000X3536X3000

CREW:
4

WEIGHT:
41,5 T

ENGINE:
V-46-5M, DIEASEL, 690HP

MAXIMUM SPEED:
50 KM/H

Armament:

Rifle gun	100mm D10-T2S
Machine gun	7,62mm PKT
Machine gun	12,7mm DShK-M
Guided weapon system	1K13-22

Production

BTR-4

ARMORED PERSONNEL CARRIER

The BTR Armored Personnel Carrier (APC) is designed for transportation of infantry unit personnel and fire support providing in the combat. This APC is used for equipping units able to fight in various conditions, including NBC environment.

New BTR-4 with 8x8 wheel arrangement is equipped with NATO standard Deutz engine and Allison transmissions. Turbocharged 6-cylinder 11.9 liter diesel engine BF6M 1015Cp allows to have a 515 horsepower output at maximum 1800 rpm.

Available space of the engine compartment allows installation of more powerful engines in case of necessity.

BTR-4 in its standard version equipped with uninhabited combat turret BM-7 “Parus” with a 30-mm automatic gun ZTM-1, 30 mm grenade launcher and 7,76 automatic gun, “Barrier” antitank guided missile system, however a number of different combat turrets are available for integration depending on the customer’s needs.

BTR-4 belongs to a promising class of wheeled combat vehicles, which can perform a wide range of tasks in modern war. It’s a basic vehicle for equipping quick-reaction forces and marine units, fulfilling day-and–night tasks, under various climate conditions (operating temperature range from -40 up to +55 C), off-road and on hard-surface.

These combat vehicles can be equipped with different weaponry capable to destroy enemy armored vehicles including tanks. Additional protection systems can be also installed optionally: against fragment of large-caliber projectiles or small-caliber automatic guns and projectiles.

The practical use of BTR-4 has proven the highest level of crew and troops protection when performing combat tasks in eastern Ukraine.

Armored personnel carriers

DIMENSIONS:
7650X2900X2860

CREW:
3

LANDING FORCES:
7-9

MODIFICATION MASS:
FROM 17,5 T TO 21,5 T
WITH ANTI SHOT PROTECTION

ENGINE:
DEUTZ FOUR-STROKE DIESEL
OR 3TD TWO-STROKE

MAXIMUM SPEED:
100 KM/H

TRANSMISSION UNIT:
ALLISON 4500SP

Armament:

Automatic Gun	ZTM-1
Caliber	30 mm
Coaxial machine gun	KT-7,62
Caliber	7,62 mm
Grenade launcher	KBA-117(AG-17)
Caliber	30 mm
Antitank missile complex	complex 212
Maximum target defeating range	5000 m

The APC can be used as a basic vehicle for equipping quick-reaction forces and marine units.
The APC can fulfil its tasks day-and-night, under various climatic conditions, on hard-surface roads and off-road. The operating temperature range of the APC is -40 to +55 °C.

The BTR-4 APCs can be fitted with the following weapon stations

«Grom»
remote-controlled weapon station

Bau-23x2
remote-controlled weapon station

Bm-3 «Shturm»
remote-controlled weapon station

Bm-7 «Parus»
remote-controlled weapon station

Additional protection:
against fragment of large-caliber projectiles gun and projectiles of small-caliber automatic guns

Production

BTR-4K

COMMAND VEHICLE

The BTR-4 is intended to transport personnel of mechanized infantry units and to provide fire support in combat. Command Vehicle is a modification of the BTR-4 Armored Personnel Carrier.

BTR-4KSh

COMMAND AND STAFF VEHICLE

The BTR-4 is intended to transport personnel of mechanized infantry units and to provide fire support in combat. Command and Staff Vehicle is a modification of the BTR-4 Armored Personnel Carrier.

Production

BTR-4S

CASUALTY EVACUATION VEHICLE

Intended for searching and evacuation of wounded from mass destruction places and medical service providing (incl. first aid during transportation) in different time and season as well as to use as mobile bandaging room. The vehicle constitutes a modification of the BTR-4 vehicle.

BTR-4RM

REPAIR AND RECOVERY VEHICLE

Intended to conduct technical reconnaissance on the battle area during the day-and-night time; take in tow disabled and damaged operated and unguided vehicles, carry out load-lifting works, the works of welding and support the crew of other vehicles. The vehicle constitutes a modification of the BTR-4 vehicle.

Production

BTR-3E1

ARMORED PERSONNEL CARRIER

The BTR – 3E1 Armored Personnel Carrier (APC) is intended to transport mechanized infantry units and to provide fire support in combat operations. It can be used as a basic vehicle forequipping quick-reaction forces and marine units. The APC can operate day-and-night, under various climatic conditions, on hard-surface roads, off-road, and in NBC environment.

DIMENSIONS:
7850X2900X2774

CREW:
3+10

WEIGHT:
16 T.

ENGINE:
MTU 6R106TD21

MAXIMUM SPEED:
100 KM/H

Armament:

Automatic Gun	ZTM-1, 30 mm
Coaxial machine gun	KT-7,62 mm
Grenade launcher	KBA-117(AG-17), 30 mm
Antitank missile complex	complex 212
Range of fire maximum	5000 m

Airtight and waterproof armored carrying hull is a basis of the vehicle structure. The hull is made of a very hard steel and is reinforced with Kevlar from inside. The hull provides protection against 7.62mm bullets and it is possible to improve the protection level up to the level resisting to 12.7mm bullets.

Armament:
- "Shturm" combat module
- or "Shturm-S" combat module
- or " Shkval" combat module

- The crew is accommodated in the airtight and waterproof hull which protects them against nuclear radiation, chemical and biological effects.
- The number of hatches designed for boarding and dismounting of the crew is 6.
- The design of the armored hull and running gear provides high-level protection against explosion after hitting an anti-tank mine.
- The number of ports designed for firing from personal weapons is 8.

Auxiliary Equipment:
- Pull winch (force, t) 6
- Firefighting system (type) Automatic
- Filtration unit (type) With full-flow filter
- Heater (heating efficiency, kW) 18
- Air conditioner (cooling efficiency, kW) 10

- Engine (type and model): Diesel, MTU 6R106TD21 or DEUTZ BF6M 1015
- Power output, h.p.: 326
- Transmission: Automatic, Allison Transmission 3200 SP

Production

BTR-3M1

81-MM SELF-PROPELLED MORTAR

Intended for direct fire support of infantry subunits, is capable to follow tanks, on the move overcome entrenchments, trenches and water obstacles.

BTR-3M2

120-MM SELF-PROPELLED MORTAR

Production

BTR-3RK

COMBAT VEHICLE WITH ATGM

Combat wheeled amphibious vehicle with armored protection, high level of mobility and armament (including control complex), it is able rapidly identify, recognize and destroy ground-based (as well as armored) and low-flying targets with high efficiency, and intended to transport mechanized infantry units. Armored personnel carrier is to follow tanks, on the move overcome trenches and water obstacles.

BTR-3S

ARMORED MEDICAL VEHICLE

BTR-3S Armored Medical Vehicle is intended to search and evacuate wounded men from fires of mass defeat and provide them with medical service (including first aid during transportation) under different natural-climatic conditions and during any time of the year, day and night, and also to be used as mobile bandaging room.

Production

BTR-3BR

ARMORED REPAIR AND RECOVERY VEHICLE

BTR-3BR Armored Repair and Recovery Vehicle is intended to conduct technical reconnaissance on the battle area during the day-and-night time; take in tow disabled and damaged operated and unguided vehicles to the nearest hiding place or assembling place for damaged cars; carry out load-lifting works with moving a cargo.

BTR-3U

ARMORED PERSONNEL CARRIER

Combat wheeled amphibious vehicle with armored protection, high level of mobility and armament (including control complex), it is able rapidly identify, recognize and destroy ground-based (as well as armored) and low-flying targets with high efficiency, and intended to transport mechanized infantry units. Armored personnel carrier is to follow tanks, on the move overcome trenches and water obstacles

Armored personnel carriers

Production

OTAMAN 8X8

ARMORED FIGHTING VEHICLE

Armored fighting vehicle with 8×8 wheel formula. Produced with using some spare parts of BTR-60 (mostly suspension parts). Unlike traditional Soviet BTR, is designed according to modern-day trend in compartments disposition: engine compartment in front, troops/fighting compartment – at rear.

Manufactured as basic platform for differentiated modifications – armored personnel carrier, infantry fighting vehicle (with 25/30 mm. weapon station), ambulance, command-and-control vehicle, repair vehicle, fire support vehicle (with mortar or howitzer).

DIMENSIONS:
7000X2660X2430

CREW:
3 – 14

WEIGHT:
13 T

ENGINE:
DEUTZ, DIESEL

TRANSMISSION:
ALISSON, AUTOMATIC

Main Specifications:

Power, hp	320
Torque	1200 N*m
Ballistic protection	STANAG level 2
Equipment	Radiostation, Navigation device, Thermal camera for night driving, 360° day/night camera system, Climatic system, NBC filtration device, Intercom, Automatic firefighting system, Blackout headlights, CTIS

OTAMAN 6X6

ARMORED FIGHTING VEHICLE

Armored fighting vehicle with 6×6 wheel formula. Unlike traditional Soviet BTR, is designed according to modern-day trend in compartments disposition: engine compartment in front, troops/fighting compartment – at rear.

Manufactured as basic platform for differentiated modifications – armored personnel carrier, infantry fighting vehicle (with 25/30 mm. weapon station), ambulance, command-and-control vehicle, repair vehicle, fire support vehicle (with mortar or howitzer).

DIMENSIONS:
6500X2660X2450

CREW:
3 – 10

WEIGHT:
16 T

ENGINE:
DEUTZ, DIESEL

TRANSMISSION:
ALISSON, AUTOMATIC

Main Specifications:

Power, hp	320
Torque	1200 N*m
Ballistic protection	STANAG level 2-4
Equipment	Radiostation, Navigation device, Thermal camera for night driving, 360° day/night camera system, Climatic system, NBC filtration device, Intercom, Automatic firefighting system, Blackout headlights, CTIS

Upgrade + Overhaul

BTR-80UP

ARMORED PERSONNEL CARRIER

BTR-80UP is intended to transport personnel of mechanized infantry units and to provide fire support.

DIMENSIONS:
7650X2900X2350

CREW:
3+7

WEIGHT:
13,6 T

ENGINE:
FPT IVECO TECTOR

MAXIMUM SPEED:
100 KM/H

Armament:

Machine gun	KPVT
Caliber	14,5 mm
Machine gun	PKT
Caliber	7,62 mm

Production

VARAN APC

ARMORED PERSONNEL CARRIER

On the chassis of VARAN APC are developed: command vehicle, communication post, ambulance, recovery vehicles, common chemical protection, engineering, 120 mm automatic mortar vehicles.

DIMENSIONS:
7500X3200X2800

COMBAT WEIGHT:
16,2 T

RUNNING RANGE:
750 KM

MAXIMUM SPEED:
110 KM/H

CREW:
3+8

ENGINE:
Deutz TCD 2013 Turbo Diesel

Main Specifications:

Power, hp	320
Torch, Nm	1200
GEAR	Automatic or 6-step mechanical Allison
Equipment	Optic electronic module with thermal camera, day camera, laser range finder

Weapon:

30mm automatic gun – ZTM-1 (2A72)
7,62mm machine gun PKT
30mm grenade launcher AG-17
ATGM “Barrier”
Smoke grenades, 902B “Khmara”

Armored personnel carriers

Upgrade + Overhaul

BTR-70D

ARMORED PERSONNEL CARRIER

BTR-70D is intended to transport personnel of mechanized infantry unitson road and in the water and to provide fire support.

DIMENSIONS:
7535X2800X2235

CREW:
3+7

WEIGHT:
13 T

ENGINE:
4-STROKE, 6-CYLINDER DIESEL, 300HP

MAX.SPEED:
80

Armament:

Automatic Gun	30 mm, ZTM-1,
Machine gun	7,62 mm, KT(PKT)
Grenade launcher	30 mm, AG-17
Anti-tank guided missile	«Barrier»

BTR-70DI

ARMORED PERSONAL CARRIER

It is intended for transportation of mechanized unit personnel and for its fire support. The Armored personnel carrier can be equipped with various types of armament.

DIMENSIONS:
7650X2900X2350

CREW:
3+7

WEIGHT:
13,6 T

ENGINE:
FPT IVECO TECTOR

MAXIMUM SPEED:
100 KM/H

Armament:

Mount type	turret, machine gun
Machine gun	KPVT
Caliber	14,5 mm
Machine gun	PKT (KT)
Caliber	7,62 mm

Upgrade + Overhaul

BTR-70Di-02

TRANSPORTATION BASE FOR 'SVITIAZ' FACILITY

'Svitiaz' is intended for provision of command and control over the troops, organization of communications within the operational-tactical level of command in motion, afloat and at stop, both independently and as part of the communications node.

DIMENSIONS:
7535X2800X2300

CREW:
2+3

WEIGHT:
12,25 T

ENGINE:
FPT IVECO TECTOR

MAXIMUM SPEED:
100 KM/H

BRDM-2

ARMORED RECONNAISSANCE PATROL VEHICLE

Upgraded BRDM-2 armored vehicle is intended for fire support of scout and infantry units. The vehicle is characterized by improved off-road capacity and smooth ride, for water obstacles crossing the armored vehicle is equipped with a water jet.

CREW:
4

WEIGHT:
7,5

ENGINE:
GAZ-41.V8 PETROL, CARBURETOR

MAXIMUM SPEED:
90 KM/H

Armament:

14.5 mm KPVT machinegun	1
Ammunition load	500
7.62 mm PKT machinegun	1
Ammunition load	2000

Armored infantry combat vehicles

Production + Upgrade + Overhaul

BRDM NIK

ARMORED RECONNAISSANCE AND PATROL VEHICLE

BRDM-NIK is the upgraded version of BRDM-2. Enhancements are focused on improving the armor protection of the crew. It differs from the previous versions mostly in a modified configuration of the vehicle's hull, which makes it possible to install additional types of protection.

WEIGHT:
8,2 T

ENGINE:
FPT IVECO Tector (Euro-3) diesel engine

POWER:
150 Hp

MAX.SPEED:
100 KM/H

CRUISING RANGE:
1100 KM

Armament:

"Falkonet" RVC
- 14,5mm KPVT machine-gun (500 rounds)
- 7,62mm PKT machine gun (2000 rounds)

Additional equipment:

digital communication equipment

BMP-1UM

ARMORED INFANTRY COMBAT VEHICLE

BMP-1 Armored Infantry Combat Vehicle with 'KBA-105TB 'Shkval-A' Remote Weapon Station (RWS) Enhanced fire power RWS is designed to defeat ground and low-flying targets. RWS is controlled by special fire control system and stabilizer.

DIMENSIONS:
6735X2940X2450

CREW:
3+8

WEIGHT:
14 T

ENGINE:
3TD-2, 400 HP

MAX.SPEED:
70 KM/H

Armament:

Automatic Gun	30 mm, ZTM-1,
Machine gun	7,62 mm, KT(PKT)
Grenade launcher	30 mm, AG-17
Anti-tank guided missile system	«Barrier», 2 units

Upgrade + Overhaul

BMP-55

ARMORED INFANTRY COMBAT VEHICLE

BMP-55 is designed and produced on the basis of T-55. From the existent samples BMP-55 differs by antiprojectile armor and forward location of engine transmission compartment, that significantly enhances the protection of crew. The particular difference of the vehicle is the location of troop's ramp in the stern that allows inserting the force under the shelter of armored vehicle hull. Engine and transmission are installed in one block adapted to quick replacement.

DIMENSIONS:
6200X3210X1950

CREW:
3+8

WEIGHT:
28,5 T

ENGINE:
5TDF

MAXIMUM SPEED:
60 KM/H

Armament:

Machine gun	NSVT
Caliber	12,7 mm

BMP-64

ARMORED INFANTRY COMBAT VEHICLE

BMP-64 is designed and produced on the basis of T-64 Tank, has cannonproof armor and forward located engine transmission compartment, the bottom of which contains additional anti-mine protection. Vehicle can be subsumed into the MRAP category (Mine Resistant Ambush Protected), so as such with the enhanced sustaining power to countermining and protection from ambushing. The distance fire control, TV sight with self-sufficient stabilizer, cameras of wide and narrow range of vision, thermal camera, and laser rangefinder are also provided. Driver is equipped with TV surveillance scope.

DIMENSIONS:
6500X3300X1950

CREW:
3+12

WEIGHT:
34,5 T

ENGINE:
5TDF

MAXIMUM SPEED:
60 KM/H

Armament:

Launchers	2 AAC, 1 ATMS
Gun	2A42
Caliber	30 mm
Machine gun	PKT
Caliber	7,62 mm

Upgrade + Overhaul

MT-LBMSH

LIGHT MULTI-PURPOSE TRACKED VEHICLE

The MT-LBMSh is a light multi-purpose soft-terrain vehicle which can be used as an APC or Command vehicle, a prime mover for various types of artillery, cargo and general transport vehicle.

DIMENSIONS:
6454X2850X2410

CREW:
2+7

WEIGHT:
12 T

ENGINE:
YAMZ-238B, DIESEL, 360 HP

MAXIMUM SPEED:
60 KM/H

Armament:

Main gun	30 mm, ZTM-1
Main gun	7,62 mm, PKT
Antitank guided missile system	Barier
Automatic grenade launcher	AG-17

Production + Overhaul

Atlet

ARMORED REPAIR AND RECOVERY VEHICLE

The Atlet is designed for recovery and towage of damaged armored vehicles, welding and excavation, as well as transportation of up to 1,5 tonnes of spare parts and consumables

DIMENSIONS: 8890X3560X2740

CREW: 3

WEIGHT: 46+3%

ENGINE: 6TD-2

POWER OUTPUT, KW (HP) 882(1200)

CRUISING RANGE ON ROAD: 450

MAXIMUM SPEED: 60 KM/H

Main Specifications:

Lifting capacity	25 t
Winch tractive power	25 t
Bulldozing kit effectiveness	150 m^3/h
6TD-2 engine power output	882 (1200) kW (hp)

Special equipment:

MAIN WINCH
AUXILIARY WINCH
CRANE
LOADING PLATFORM

BTS-5B

UNIVERSAL MULTI-PURPOSE TRACTOR

Designed to conduct mechanical reconnaissance on the battlefield, work on the emergency evacuation of tanks from the enemy war zone, pulling tanks that stuck or sank, carrying lifting, digging, welding works and technical provision of armored units in the field.

DIMENSIONS: 7890X3460X2687

CREW: 3

WEIGHT: 41 T

ENGINE: V-84

MAXIMUM SPEED: 60 KM/H

Armament:

Machine gun	NSV
Caliber	12,7 mm

Special equipment:

Tractive winch
Auxiliary winch
Bulldozer equipment
Crane unit
Electric welding equipment
Loading platform

Production + Overhaul

IMR-2

COMBAT ENGINEER VEHICLE

Combat Engineer Vehicle IMR-2 is designed to create passageways, clearing blockages and destructions during engineer support of combat troops, for rescue operations in zones of mass destruction, support for lifting operations.

DIMENSIONS:
9950X3735X3680

WEIGHT:
45,7 T

CREW:
2

MAXIMUM SPEED:
45 KM/H

Operational efficiency:

while creating passages:	
▮ in felled trees	340-450 m/h
▮ in stone road-blocs	300-350 m/h
when laying convoy paths	6-10 km/h
when moving soil	230-300 m/h

BMR-2

ARMORED DEMINING VEHICLE

Special tracked Armored Demining Vehicle BMR-2 is designed for demining roads, creation of passages in minefields.

DIMENSIONS:
9650X3850

CREW:
5

WEIGHT:
36 T

Armament:

Machine gun	NSV
Caliber	12,7 mm

Crane arm:

type	dismountable with manual transmission RUL-1,5
carrying capacity	3000 kg

Mounted equipment:

Mine trawl	KMT-7

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Production + Overhaul

BREM-2

ARMORED REPAIR AND RECOVERY VEHICLE

The BREM-2 armoured recovery and repair vehicle is intended for:

- Towing of damaged and faulty BMP-1, BMP-2 vehicles and vehicles developed from them; Pulling of bogged-down vehicles with effort up to 20 tf;
- Lifting of loads featuring weight up to 1.51.;
- Repair and maintenance of BMP-1, BMP-2 vehicles and vehicles developed from them.

CREW: 4

WEIGHT: 13

ENGINE: 4-STROKE DIESEL, V-6

POWER OUTPUT: 300 HP

Armament:

Machine gun	7.62 mm PKMB
Ammunition load	2.000 cartidges
Engine, type	UTD-20, four-stroke diesel, V-6
Power output	300 hp

PTS-M (PTS-2)

AMPHIBIOUS VEHICLE

It is intended for assault water crossing of artillery systems, wheeled and tracked tractors, APCs, manpower and any other cargoes. PTS-M (PTS-2) amphibious vehicle has high level of performance, maneuverability, cross-country ability, has a significant water buoyancy reserve and can be used under the marine conditions with the waves of up to3 points.

DIMENSIONS: 11990X3300X3170

CREW: 2

WEIGHT: 22,4 T

ENGINE: B-46-5

MAXIMUM SPEED: ON SURFACE 60 KM/H ON THE WATER 11,7 KM/H

Unit loading:

On surface	20 t
On the water	12 t

Production + Overhaul

MRV

CASUALTY EVACUATION VEHICLE

Casualty Evacuation Vehicle (CEV) on BMP-1 chassis.

CEV is a truck, armored, maneuverable, amphibious vehicle based on BMP-1 armored infantry fighting vehicle chassis. It can be used as:

- armored medical transporter for search and rescue of wounded;
- armored first aid medical clinic.

DIMENSIONS:
6755X3160X3600

WEIGHT:
14 T

CREW:
3

ENGINE:
UTD-20

PLACES TO TRANSPORT WOUNDED:
AT THE STRETCHERS – 4, SITTING – 8

Special equipment:

air conditioner
heater
bandaging table
inhaler with spare air cylinders
water tank
medical stretchers
washstand
complete set of immobilizing splints
lock box

MTU-20

Production

MECHANIZED BRIDGE

Mechanized Bridge MTU-20 is designed to create passages up to 18 meters and make passways for tanks and other military vehicles weighing 50 tons, across rivers, ditches, cliffs.

DIMENSIONS:
11640X3300X3400

ENGINE:
5TDF

CREW:
2

MAXIMUM SPEED:
50 KM/H

WEIGHT:
32 T

Main Specifications:

Time to set one bridge span	5 min
Width of barriers	18 m
Load-carrying capacity of the bridge	to 50 t

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Upgrade

9k58/BM-30 SMERCH

MULTIPLE LAUNCH ROCKET SYSTEM

The main advantages of the modernization of 300 mm Multiple Launch Rocket System 9k58/BM-30 Smerch:

- New rocket fuel, warhead, guiding and control systems
- Impulse engines – Gas Dynamic Control for correction and guidance
- Satellite and Inertial Navigation system
- Higher accuracy and efficiency
- The possibility of missiles dispensing in the final attack phase.
- The vehicles can be equipped with an automated launch system
- Individual guidance of each missile to the target

Production + Upgrade

BM-21 GRAD

MULTIPLE LAUNCH ROCKET SYSTEM

Modernized Multiple Launch Rocket System BM-21 Grad to the level BM-21U Verba

Modernization kit:

1)New fire control and command system

2) Interaction with automated control of reactive artillery batteries

3) Integrated navigation and topographic control system

4) Automated leveling system

5) Automated targeting control system (ATCS)

6) Transport-loading machine (TZM) with the loading device. Automated leveling system of a transport and load vehicle is intended for leveling the platform of the loading device in the horizontal plane while loading BM-21U combat vehicle

Production

DOZOR-B

ARMORED VEHICLE

Light armored personnel carrier DOZOR-B is designed to protect the crew and troops from small arms fire, shrapnel and mines namely: from 7.62-mm armor piercing bullets at distance 30 meters and from shrapnel of 150 mm high-explosive shell which exploded at distance 50 meters.

DIMENSIONS:
5600X2400X2700

CREW:
3+8

WEIGHT:
8,45 T

ENGINE:
DEUTZ BF4M 1013FC

MAXIMUM SPEED:
120 KM/H

Armament:

Machine gun	NSVT (KT-12,7)
Caliber	12,7 mm

Arms of light armored personnel carrier DOZOR-B allows to inflict damage on enemy manpower, light armored vehicles and as well to carry effective fire on air targets that fly at subsonic speed. The body within is covered with ballistic protection material such as «Kevlar».

Turret machine gun unit with remote control MGU-12,7, with a television camera, thermal vision cameras and laser rangefinder. Television camera with wide and narrow field of view. The spectral operating range of thermal imaging cameras 8-12 microns. The wavelength of the laser rangefinder is 1.06 microns. Ammunition–150 bullets. Aiming angles vertically-from -5° to + 60°, by the horizon-360°.

- Engine - four stroke four cylinder diesel with turbocharging DEUTZ BF 4M1013FC capacity of 190 hp
- Automatic transmission Allison LCT 1000
- Independent suspension, torsion bar on wishbone.

The vehicle is equipped:

- air conditioning system and air cleaning
- ventilation system with forced air circulation and removal of powder gases when firing small arms
- liquid type heating system
- centralized paging wheels system
- communications equipment
- satellite navigation system
- winch with a pulling force of 4100 kg

Production

Bars-6

ARMORED PERSONNEL CARRIER

Multipurpose 4x4 APC with the best off road capability. Meets high standards quality, so that was specifically developed for military purposes.

DIMENSIONS:
2200X5500X2400

CREW:
6+3

GROSS WEIGHT:
5650 KG

ENGINE:
3,9 DIESEL / HYUNDAI D4D / V4 IN-LINE

MAXIMUM SPEED:
120 KM/H

Main Specifications:

Drive configuration	4 x 4
Transmission	5MT
Horsepower/rev	130/2900
Max. torque/H.m/rev	370/1600
Payload, kg	1650
Tires, type	36x12,50R16. 5LT
Armoring level	CEN level BR6
Wheelbase, mm	3200
Ground clearance, mm	25
Max. Gradeability	60%
Angle of Departure	20 %
Angle of Approach	40 %
Fording depth (w/o) Kit	760 mm
Cruising Range	500 km
Warm / cold start	-35 / +50

- Strong and reliable chassis frame
- Roof-mounted 360' traversing turret with perimeter protection 7.62 mm Caliber PKM gum mount assembly
- Ballistic steel-case fuel tank protection
- Heavy duty front and rear ram bumpers
- Strengthened suspension – reinforced as necessary to compensate for additional weight of the vehicle

Production

Bars-8

ARMORED PERSONNEL CARRIER

BARS - 8 - Ukrainian multi-purpose APC with 4×4 wheel formula, designed to perform tactical tasks, defend checkpoints and to conduct combat operations in urban areas.

DIMENSIONS:
2200X6000X2400

CREW:
8+2(3)

GROSS WEIGHT:
8000 KG

ENGINE:
6,7 CUMMINS /V8/ TURBO DIESEL

MAXIMUM SPEED:
110 KM/H

Main Specifications:

Drive configuration	4 x 4
Transmission	6AT/6MT Aisin
Horsepower/rev	385/2900
Max. torque/H.m/rev	1173/1600
Payload, kg	2 000
Tires, type	40x13.50R1
Armoring level	CEN level BR6
Armor defence	360 ° ballistic protection from 5,45 mm, 7,62 mm bullets
Wheelbase, mm	3 670
Ground clearance, mm	280
Flotation	road clearance 280 mm

- Strong and reliable chassis frame
- Roof-mounted 360' traversing turret with perimeter protection 7.62 mm Caliber PKM gum mount assembly
- Ballistic steel-case fuel tank protection
- Heavy duty front and rear ram bumpers
- Strengthened suspension – reinforced as necessary to compensate for additional weight of the vehicle

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Production

Kozak 2M

LIGHT ARMOURED VEHICLE

New-made modification of Kozak 2. Unlike regular Kozak 2, Kozak 2M don't use truck chassis as basis, but is made with monocoque body and independent suspension. This, in combination with CTIS, gives better off-road performance. All other construction features, including ballistic and blast protection, are equal to Kozak 2

DIMENSIONS:
6230X2500X2300

FULL WEIGHT:
12000 KG

SEATING CAPACITY:
3 – 10

ENGINE TYPE:
IVECO, DIESEL

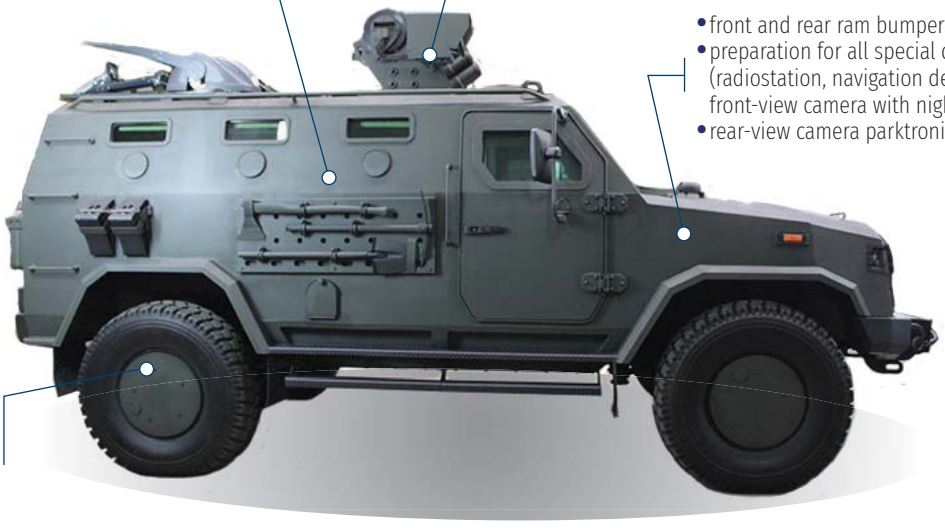
Main Specifications:

Power, h.p.	280
Torque, Nm	950
Transmission	ZF, manual
Ballistic Protection	STANAG level 2

- special alloyed armor steel as major protection material antispall layer in all side walls
- bulletproof glasses with internal antispall layer V-shaped hull
- multi-layer floor, absorbing blast energy

- special anti-mine seats, installed back-to-back and attached to the roof turret with possibility of 7,62 PKMS and 12,7 automatic gun installation evacuation-and-ventilation hatches
- gun-ports in side windows landing door

- front and rear ram bumpers electrical winch
- preparation for all special devices (radiostation, navigation device etc.) front-view camera with night vision
- rear-view camera parktronic intercom



Wheels are equipped by «run-flat» that allows to move with penetrated tires air conditioner

Production

Kozak 5

VEHICLE FOR POLICE AND SPECIAL FORCES

Vehicle for police and special forces like KORD (Ukrainian SWAT). Based on 4×4 truck Ford F550, specially modified by official Ford converter "DBL Design" (front axle strengthening, suspention and brakes enforcing, bigger wheels installing). Level of ballistic protection – STANAG level 1+.

Is intended for small groups transporting and using its body as armor screen in case of skirmishes. Also can be equipped by ladder for buildings assault.

DIMENSIONS:
5380X2360X2320

FULL WEIGHT:
10000 KG

SEATING CAPACITY:
3 – 8

ENGINE TYPE:
FORD, DIESEL

Main Specifications:

Power, h.p.	400
Torque, Nm	997
Transmission	TShift, automatic
Ballistic Protection	STANAG level 2

Varta

ARMORED PERSONNEL CARRIER

VARTA - is an Armored Personnel Carrier (APC). It is ideal for transporting soldiers in combat situations and can also be equipped as a Command-Post Vehicle, or evacuation of troops.

The vehicle compartment is made from specialized 560 steel grade which protects crew from armored piercing incendiary ammo up to 7.62mm.

VARTA uses a V-shape hull structure to accommodate anti-mine seats, giving crew members protection to withstand detonation of charges up to 6kg of TNT.

VARTA includes a fighting module equipped with either the 7.62 mm or the 12.7 mm machine gun. The vehicle has 10 gun ports around the vehicle with the feasibility of accommodating a UBGL (Under-Barrel Grenade Launcher).

DIMENSIONS:
6900X2550X2800

ENGINE TYPE:
V6 TURBO DIESEL

CREW:
2+8+GUNNER

MAXIMUM SPEED:
120 KM/H ON ROAD

FULL WEIGHT:
16,65 T

Main Specifications:

Protection	Level 2 by STANAG 4569, protection against firing of arms 7,62 caliber and mine blast 6 kg TNT.
Wheel arrangement	4x4 (all terrain chassis)
Load capacity	3 t
Power, h.p.	270 or 300
Ground clearance	400 mm
Maximum range	1 250 km
Fording	1 m
Side-slope	45%

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Production

KrAZ-Spartan

ARMOURED VEHICLE

KrAZ Spartan armored vehicle is used for carrying personnel in highly dangerous areas. Spartan is designed to resist ballistic threats from any angle.

SEATING CAPACITY:
2 + 6

GROSS WEIGHT, KG:
5900

ENGINE TYPE:
DIESEL

MAXIMUM SPEED:
105 KM/H

GEARBOX
AUTOMATIC, 6-SPEED

Main Specifications:

Configuration	4x4
Power, h.p.	232
Tyres	265/65R18 (RunFlat)
Protection	CEN level BR6
Floor	2x DM-51 granades

KrAZ-Cougar

ARMOURED VEHICLE

Cougar highly mobile armored vehicle is designed for carrying and protecting personnel.

SEATING CAPACITY:
2 + 6

GROSS WEIGHT, KG:
5900

ENGINE TYPE:
DIESEL

MAXIMUM SPEED:
105 KM/H

GEARBOX
AUTOMATIC, 6-SPEED

Main Specifications:

Configuration	4x4
Power, h.p.	232
Tyres	265/65R18 (RunFlat)
Protection	CEN level BR6
Floor	2x DM-51 granades

Production

Triton-01

LIGHT ARMORED VEHICLE

The 4 x 4 lightly-armoured platform is an armoured vehicle with the 4x4 axle configuration, designed for the transportation of military personnel, armor, ammunition, special cargo and light weapons station, communication facilities and special equipment.

COMBAT CREW:
3+8

TOTAL WEIGHT:
UP TO 8 T

ENGINE TYPE:
TAD620VE DIESEL ENGINE

MAXIMUM SPEED:
110 KM/H

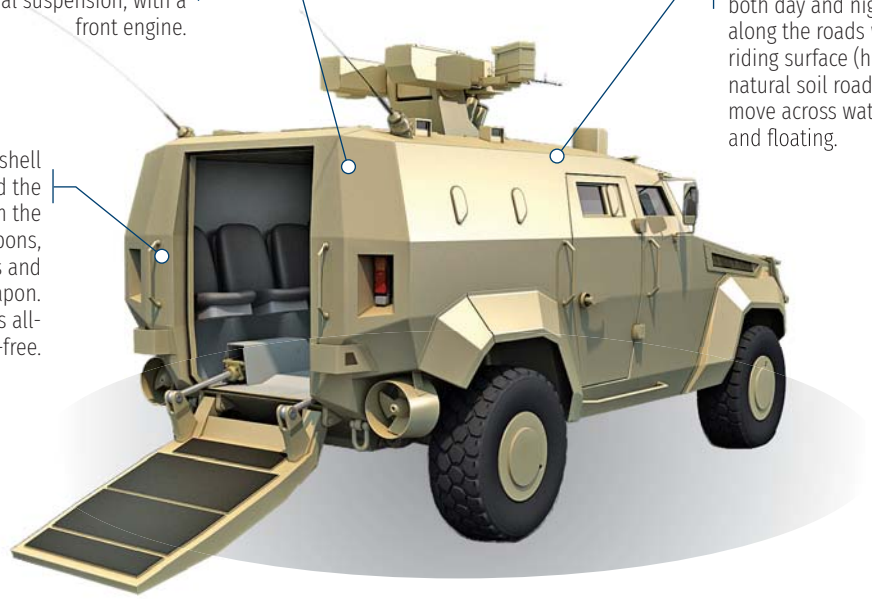
Main Specifications:

Swimming speed	up to 10 km/h
Endurance range	700 km
Weapon:	
▌machine gun	12.7 mm
▌grenade launcher	40 mm
Ammunition load:	
▌12.7 mm 50/100 shots (option of 200)	
▌ 40 mm 32 shots	
Weapon station weight	300 kg

The platform consists of:
A wheeled, two-axis vehicle with a 4 x 4 wheel arrangement and an individual suspension, with a front engine.

- The platform armoured shell protects the crew and the landing personnel from the 7.62 mm gauge basic weapons, antipersonnel mines and mass destruction weapon.
- The platform shell is all-metal, welded, leak-free.

The platform is able to attain combat tasks any time of the day, both day and night, while moving along the roads with a smooth riding surface (highways), along the natural soil roads, as well off-road, move across water obstacles wading and floating.



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Production

KrAZ-Hulk

ARMOURED VEHICLE

The KrAZ-Hulk is multirole off-road mine protected vehicle with V-hull used to carry Special Forces personnel, cargoes and equipment.

SEATING CAPACITY:
2 + 10

FULL WEIGHT:
16 000 KG

CURB WEIGHT:
16 000 KG

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
80 KM/H

Main Specifications:

Configuration	4x4
Power, h.p.	300...400
Fuel tank, l	2x165
Tyres	445/65R22.5
Ballistic protection	STANAG 4569 Level 2
Mine protection	STANAG 4569 Level 2a, 2b

KrAZ-Shrek

ARMOURED VEHICLE

The KrAZ-MPV Shrek One is multirole off-road mine protected vehicle with V-hull used to carry Special Forces personnel, cargoes and equipment.

SEATING CAPACITY:
2+10

CURB WEIGHT, KG:
17 500

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
105 KM/H

Main Specifications:

Chassis cab	KrAZ-5233HE
Configuration	4x4
Power, h.p.	300...400
Tyres	525/70R21 (CTIS)
Ballistic protection	STANAG 4569 Level 2
Mine protection	STANAG 4569 Level 2a, 2b

Production

KrAZ-Fiona

ARMOURED VEHICLE

The KrAZ-MPV Fiona is multirole armored off-road mine protected vehicle with V-hull based on KrAZ-6322. Intended for operations on transportation Special Forces personnel, cargoes and equipment.

SEATING CAPACITY:
2+10 (2+14)

ENGINE TYPE:
DIESEL, TURBOCHARGED

Main Specifications:

Chassis cab	KrAZ-6322
Configuration	6x6
Power, h.p.	300...400
Fuel tank, l	2x250
Tyres	1300x530-533 445/65R22,5 (CTIS)
Ballistic protection	STANAG 4569 Level 2
Mine protection	STANAG 4569 Level 2a, 2b

KrAZ-Hurricane

SPECIAL PURPOSE VEHICLE

KrAZ Hurricane multirole armored vehicle is designed for various combat missions.

SEATING CAPACITY:
2+10

CURB WEIGHT, KG:
24000

ENGINE TYPE:
DIESEL, TURBOCHARGED

GEARBOX
AUTOMATIC, 6-SPEED

Main Specifications:

Chassis cab	KrAZ-7634HE
Configuration	8x8
Load carrying capacity, kg	5000
Power, h.p.	350..450
Fuel tank, l	2x250
Protection level	STANAG 4569 Level 2

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Production

KrAZ-5233BE

SPECIAL PURPOSE VEHICLE

The KrAZ-5233BE Spetsnaz high mobility tactical vehicle (HMTV) are intended for prompt transportation of personnel of military units, as well as various equipment in the most hostile environmental conditions of all continents.

CURB WEIGHT, KG:
11000

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
120 KM/H

Main Specifications:

Configuration	4x4
Load carrying capacity, kg	6000
Power, h.p.	300...400
Tyres	525/70R21; 550/75R21
Max. gradient, %	58
Maximum side slope, deg	20

KrAZ-6322 Soldier

SPECIAL PURPOSE VEHICLE

The KrAZ-6322 Soldier high mobility tactical vehicle are intended for transportation of personnel of military units and various cargos. It can be used as a ballast prime mover for aircrafts transportation on airfields.

CURB WEIGHT, KG:
12900

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
100 KM/H

Main Specifications:

Configuration	6x6
Load carrying capacity, kg	12000
Power, h.p.	300...400
Tyres	525/70R21 1300x530-533
Max. gradient, %	60
Maximum side slope, deg	25

Production

KrAZ B12.2MEX

PLATFORM TRUCK

The KrAZ B12.2MEX cab-over-engine off road platform truck is used for carrying personnel and various cargoes and towing trailers over all kinds of roads and terrains.

GROSS WEIGHT, KG:
25000

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
100 KM/H

Main Specifications:

Configuration	6x6
Load carrying capacity, kg	12300
Power, h.p.	300...400
Tyres	445/65R22,5
Maximum gradient, %	58
Turning radius, m	12

Wagon trucks

SPECIAL VEHICLE

All-terrain buses based on KrAZ-63221, KrAZ-5233H2 and KrAZ-5233HE chassis are used for carrying military personnel.

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
90 KM/H

Main Specifications:

Chassis cab	5233H2	5233HE	63221
Configuration	4x2	4x4	6x6
Power, h.p.		300...400	
Seating capacity	22+2	22+2	26+2

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Production

KrAZ-6322 PA

SPECIAL VEHICLE

Combat MLRS systems as part of the vehicle chassis KrAZ-6322 and artillery - multiple rocket launcher BM-21 «Grad» or 9K57 «Hurricane».

GROSS WEIGHT, KG:
18 400 – 21 600

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
85 KM/H

Main Specifications:

Configuration	6x6
Power, h.p.	300...400

KrAZ-6446

TRUCK TRACTOR

The KrAZ-6446 all-wheel drive fifth-wheel tractor is intended for the transportation of heavy cargoes and combat vehicles including tanks on all types of roads and off the road. The tractor is used in tractor/semi-trailer combination, semi-trailer gross weight up to 70 ton.

TRUCK CURB WEIGHT, KG:
11 400

GROSS WEIGHT, KG:
28 400

ENGINE TYPE:
DIESEL, TURBOCHARGED

MAXIMUM SPEED:
65 KM/H

Main Specifications:

Configuration	6x6
Towed semi-trailer weight, kg	70 000
Fifth-wheel vertical load, kg	17 000
Power, h.p.	400
Tyres	525/70R21; 445/65R22,5
Max. gradient, %	36

Production

«FANTOM»

UNMANNED GROUND VEHICLE

«Fantom» is a remotely operated tactical unmanned multipurpose vehicle capable to fulfill various missions at day and night: reconnaissance, fire support, ambulance and rescue, operations maintenance and power source, ammunition supply, monitoring and roadblocks protection. In addition it is possible to equip it with high-precision anti-missile weapons.

DIMENSIONS, M:
3X1,6X0,91

PAYLOAD, KG:
UP TO 350

CREW:
3

RADIUS OF USE:
UP TO 10 KM

WEIGHT, KG:
1000

Sighting system:

Day and night sighting system.	Range of sight during the day - 2000 m, night - 1000 m	Capture of up to 5 targets at a distance of two kilometers Automatic tracking of targets before issuing commands to target destruction in the sequence specified by the operator
	The system of determining a signature of the type of shot	1) calculates the azimuth of the enemy firing-point 2) recognizes the type of enemy weapons 3) automatically gives the coordinates of the enemy firing point onto the operator center console
Combat module	Stabilized turntable platform enable to set different types of weapons	
	Remote control system that allows to control arms system independently of driving	
	Other types of weapon	
MACHINE GUN:	12.7 mm 3 speed modes of fighting	
Antitank guided missile system	Barier	

Mobility characteristics:

Engine type:	hybrid
Engine power, kw:	30
Drive formula:	full drive
Wheel arrangement:	6x6
Suspension:	independent hydraulic
Brakes:	hydraulic
Distance range,km:	up to 20
Maximum speed, km/h:	38
Depth ford, m:	0,5

Control system:

Secured radio channel.	The range of use – from 100 up to 10 000 meters depending on conditions of application.
Optical fiber cable	up to 5 km

Intelligent systems:

Visual odometry system using a leader and a 3D camera
Full duplex channel of communications

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«FANTOM-2»

UNMANNED GROUND VEHICLE

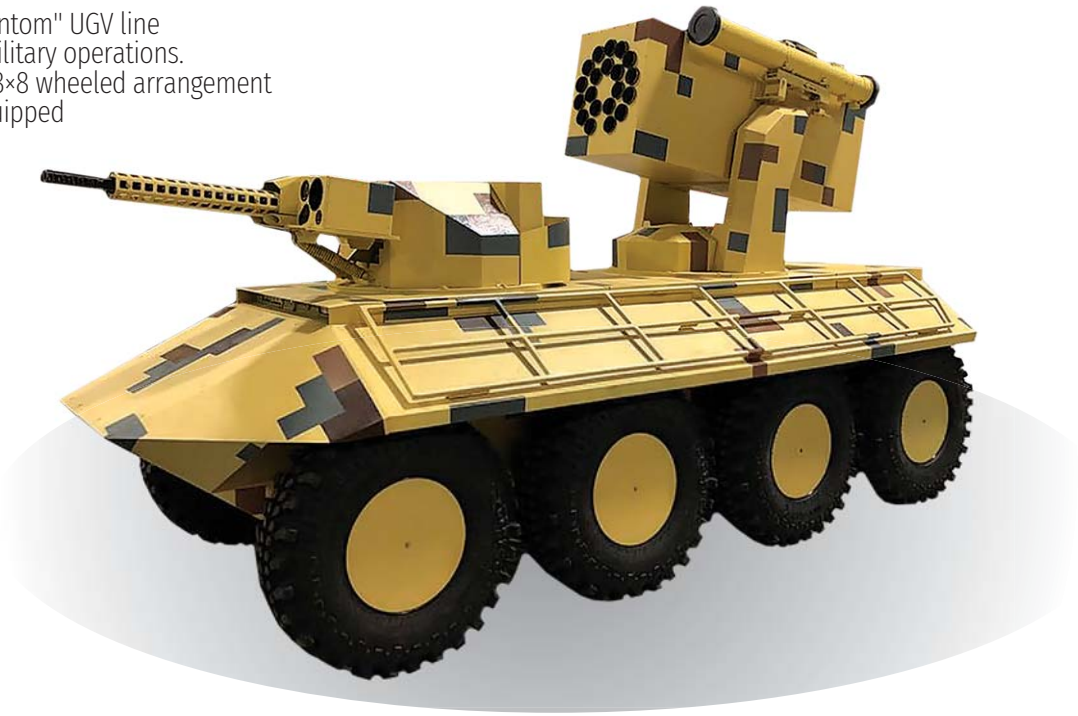
"Fantom-2" continues "Fantom" UGV line for conducting modern military operations. The "Fantom-2" UGV has 8×8 wheeled arrangement and can be optionally equipped with caterpillar.

ENDURANCE RANGE:
UP TO 130 KM

SPEED:
UP TO 58 KM/H

HYBRID SYSTEM

ENGINE POWER:
80 KW



Tactical guidance:

Radio channel for guidance:	up to 20 km
Optical fiber:	up to 5 km
Satellite channel:	unlimited

Armament:

Machine gun	23 mm
RS-80 anti-tank rockets	(20 clusters)
3-D Generation ATGM	(optionally)

«TAIPAN»

COMBAT MODULE

«Taipan» combat module is installed with system of backlash planetary gearboxes and ac converter-fed motors, that provide precise targeting at ultra slow and high speeds. «Taipan» provides automatic targeting, keeps armament prearranged position regardless repositioning of the combat vehicle while driving, provides automatic tracking of a target. The automatic command-guidance system – with allowance for weather conditions, types of projectiles, types of arms, angular velocity and target range – is installed into the combat module. Sight system can be adjusted both to the line-of-sight and horizon line.

Main perfomance data:

Machine gun:	30 mm, 2 barrels
Firing rate, rds/min	5 - 3400;
Effective range, km	1,8
Day and night observation channel	
Panoramic observation of the battlefield:	360° horizontally and from -7° to +42° vertically
Min. speed of homing on target vertically and horizontally:	not more than 0.05° per sec.
Maximum speed of homing on target vertically and horizontally:	50° per sec.
Armament options	Machine gun cal 7.62, Machine gun cal 12.6, 30 mm grenade launcher

«KASTET»

COMBAT MODULE

Armament:

Automatic Gun	ZTM-1, 30 mm
Firing rate , rds/min	330
Maximum terrestrial fire accuracy range	with APT and APIT projectiles 2000 m with HEI and FT projectiles 4000 m
Automatic Grenade Launcher	KBA117, 30 mm
Ammunition type with fragmentation grenade	VOG-17
Firing rate, rds/min	50-400
Sight shooting range	1700 m
Machine Gun	KT-7,62 mm
Firing rate, rds/min	250
Sight shooting range, m	2000
ATGM	“Barrier”
Firing range, minimum/ maximum	100 m/5000 m
Guidance system	Semi-automatic by laser beam

“Kastet” combat module is an in-depth modernization of “Shkval” combat module. The combat module is designed for arming the newly created and modernization of the existing armoured vehicles of light and medium weight class, as well as for installation on river boats and sea-going ships, fortifications and etc.

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«DOUBLET»

COMBAT MODULE

Module «Doublet» is based on chase device BMP-2, which lets to use it for combat vehicles of this family.

In addition to increased amount of firepower, an important pecularity of combat module «Doublet» is autonomous, i.e it has nothing in common with the block of guns and machine guns, installation of automatic grenade launcher. Thus in such a way is achieved not only multichannel weaponry (i.e. ability of its simultaneous usage for different purposes), but also the opportunity to refuse from common sight for weapons with different ballistacs.

Armament:	
Machine gun 1	2 ZTM 2, 30 mm
Sighting range, m	with APTr and APITr shells – 2000 m with HETr and HEI shells – 4000 m range for air targets– 2000 m Blank range/Range of direct shot – 1100 m
Fire rate	550
Machine gun 2	2 PKT, 7.62 mm
Sighting range, m	2000
Grenade launcher	AG-17, 30 mm
Sighting range, m	1700
ATGM	4 launcher of ATGM «Konkurs», 135 mm
Destruction range, m	4000
Targeting (homing)	wire guided
Sighting and firing control system:	Tandem -2-2

«BLIK-2M»

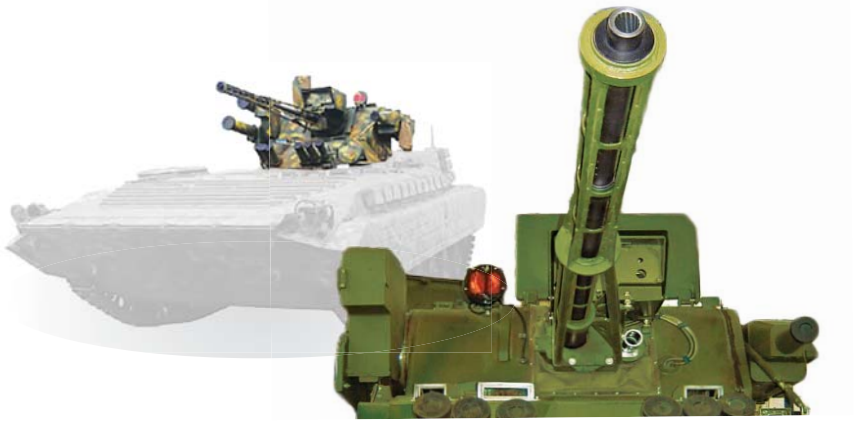
COMBAT MODULE

Machine-grenade module is designed to engage manpower, vehicles and ground objects fire 7.62 mm; 12.7 mm; gun; 30mm grenade launcher. The module can be mounted on wheeled and tracked vehicles and stationary objects. Management modules can be performed by remote control on a distance.

Armament:	
Machine gun 1	NSVT-12,7 mm
Fire rate	700
Machine gun 2	PKT, 7,62 mm
Fire rate	800
Grenade launcher	AG-17, 30 mm
Fire rate	400
ATGM	Korsar, 107 mm
Destruction range, m	100-2500
Targeting (homing) semiautomatic by laser beam	

«Shkval-A»

REMOTE WEAPON SYSTEM



Enhanced fire power RWS is mounted on BMP-1-type Armored Fighting Vehicles as well as BTR-type Armored Personnel Carriers, and is designed to defeat ground and low-flying targets. RWS is controlled by special fire control system and stabilizer.

FULL COMBAT WEIGHT:
1.96 T +2%

Armament:

Automatic gun	ZTM-1, 30 mm
Machine gun	PKT, 7,62 mm
ATGM system	Complex 212
missile type	RK-2S
Automatic grenade launcher	AG-17, 30 mm
Fire control system	Tandem-2
Weapon stabilizer	SVU-500-ZTs

«Shturm-M»

COMBAT MODULE

BM-3M «Shturm-M» Combat Module is designed for installation on the light-armored combat vehicles (APC, ICV etc) for fighting against ground and low-flying targets and autonomic usage as immovable firing points for the defense purposes and can be mounted on the sea-craft's turret.

Main Specifications:

Automatic gun	ZTM-1, 30 mm
Machine gun	KT-7,62 mm (PKT)
Anti-tank missile system	«Barrier»
Automatic grenade launcher	KBA-117 (AG-117), 30 mm
Smoke-screening system	902B

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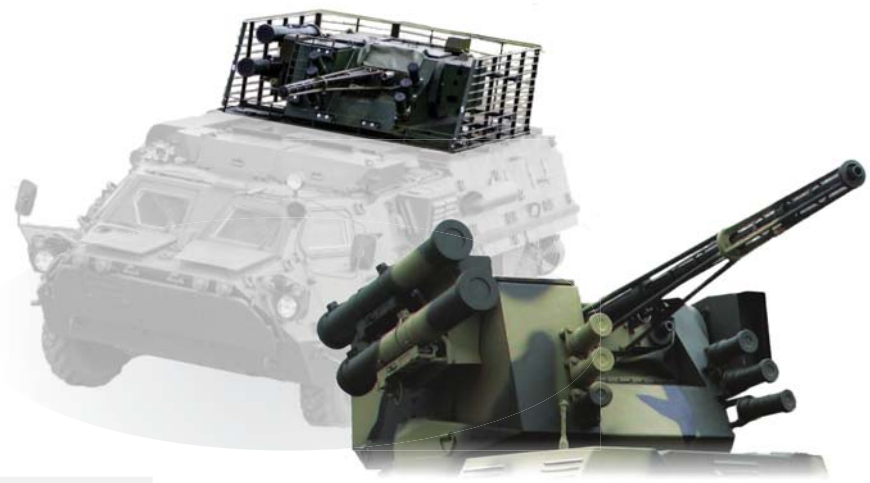
«PARUS»

COMBAT MODULE

The BM-7 “PARUS” combat module is intended to destroy enemy personnel from a stationary position or on the move, to suppress fire emplacements, and to engage other targets.



Armament:

Automatic gun	ZTM-1 or 2A72, 30 mm
Ammunition allowance	300 pcs
Machine gun	KT or PKT, 7,62 mm
Ammunition allowance	2000 pcs
Grenade launcher	AG-17, 30 mm
Ammunition allowance	149 pcs
Anti-tank guided missile	«Barrier»
Ammunition allowance	4 pcs

Additional equipment:

Self-screening system	«LINKEY»

Additional equipment:

Type	Biplanar, electromechanical “Track” Sighting System
Type TV (orTV&IR)	Day-and-night, with integrated laser rangefinder
Number of control channels	1 or 2

«STYLET»

REMOTE WEAPON STATION

Stylet is equipped with ZTM-2, PKT machine gun, AG-17 grenade launcher and Barrier ANGM. New digital sighting system Track-2.-01 for Stilet is responsible for precision of the RWS. The RWS control system is based on the multichannel optic-television sighting complex. The complex has a thermal imaging, television and optical channels, a laser channel of distance measurement and a channel of guidance of ATGM. There are implemented automatic goal support and digital image processing. The ballistic calculator completes the angular velocity of the target.

Weight, tons	1.5
Overall dimensions	3236x2155x2240

Armament:

Automatic gun	ZTM-2, caliber 30 mm
Automatic grenade launcher	KBA-117, caliber 30 mm
Machine-gun	KT-7.62, caliber 7.62 mm
ATGM	"Barrier"
Smoke halls system	"Khmara" 902B

«Barier»

VEHICLE-CARRIED ANTI-TANK MISSILE SYSTEM

Vehicle-carried anti-tank missile system mounted on the fighting vehicle turret (ICV, APC) is intended to destroy stationary and moving modern armoured targets with combined, carried or monolithic armour including ERA (explosive reactive armour), and also pinpoint targets like weapon emplacements, a tank in a trench, light-armoured objects and helicopters.

Technical characteristics:

Maximum range, m	100-5000
Flight time at maximum range, sec	23
Guidance system	semiautomatic by laser beam
Warhead type	tandem hollow-charge
Warhead armour penetration behind ERA, mm	no less than 800
Operating temperature range, C	-40 to +60

3TD-1

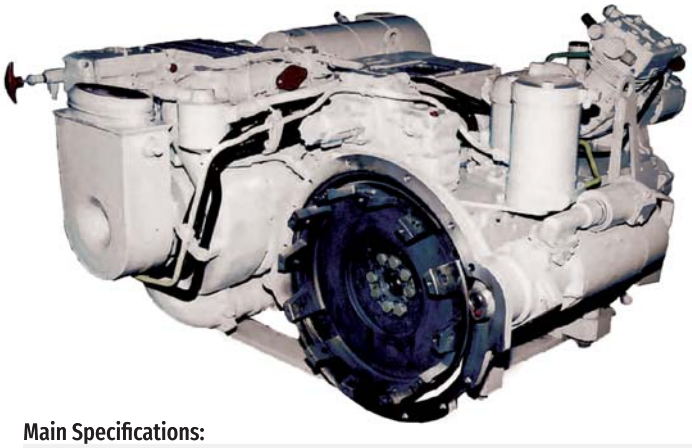
DIESEL ENGINE

Serves as a powerplant at modernization of wheeled armored vehicles: BTR-70, BTR-80, BREM on the base of BTR-70.

DIMENSIONS:
1231X955X581

RATED POWER:
280 H.P.

WEIGHT:
850 KG



Main Specifications:

Bore	120 mm
Stroke	2x120 mm
Number of cylinders	3
Nominal volume	8,15 l
Specific fuel consumption	158 g/e.h.p.h
Rotation frequency	2600 min^{-1}

3TD-2

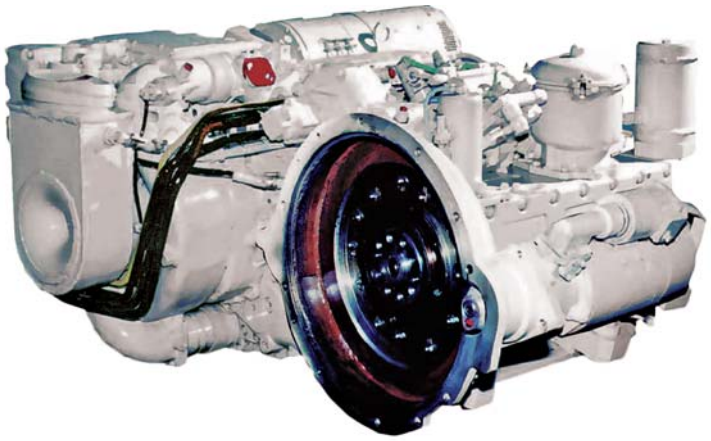
DIESEL ENGINE

Serves as a powerplant at modernization of tracked: BTR-50, PT-76, OT - 62 «Topaz», BMP-1, BMP -2 and wheeled armored vehicles.

DIMENSIONS:
1231X955X581

RAZED POWER:
400 H.P.

WEIGHT:
850 KG



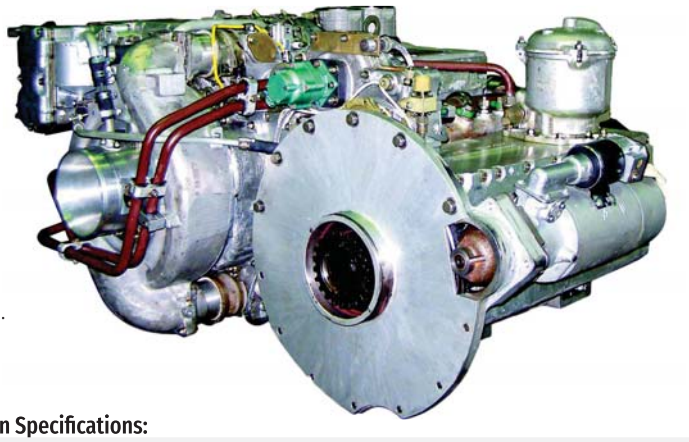
Main Specifications:

Bore	120 mm
Stroke	2x120 mm
Number of cylinders	3
Nominal volume	8,15 l
Specific fuel consumption	160 g/e.h.p.h
Rotation frequency	2600 min^{-1}

3TD-3A

DIESEL ENGINE

Serves as a powerplant at modernization of light class tracked and wheeled armored vehicles BTR-4.



DIMENSIONS:
1182X955X581

RATED POWER:
500 H.P.

WEIGHT:
800 KG

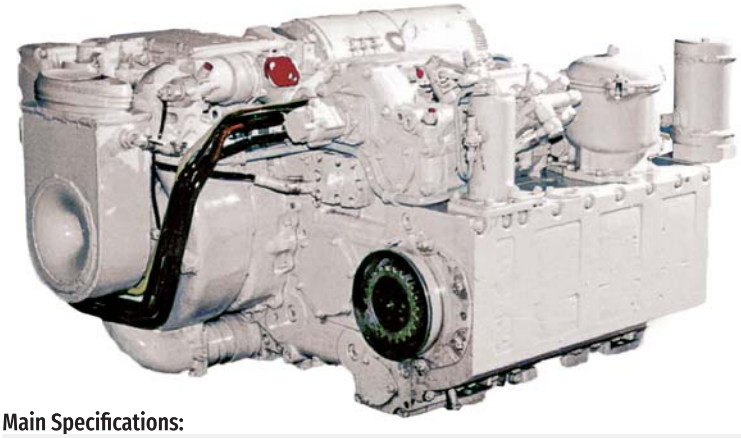
Main Specifications:

Bore	120 mm
Stroke	2x120 mm
Number of cylinders	3
Nominal volume	8,15 l
Specific fuel consumption	155 g/e.h.p.h
Rotation frequency	2600 min^{-1}

3TD-4

DIESEL ENGINE

Intended for use as a powerplant for modernization of BMP-3 and other armored vehicles.



DIMENSIONS:
1182X955X581

RATED POWER:
600 H.P.

WEIGHT:
800 KG

Main Specifications:

Bore	120 mm
Stroke	2x120 mm
Number of cylinders	3
Nominal volume	8,15 l
Specific fuel consumption	160 g/e.h.p.h
Rotation frequency	2600 min^{-1}

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4DTNA1

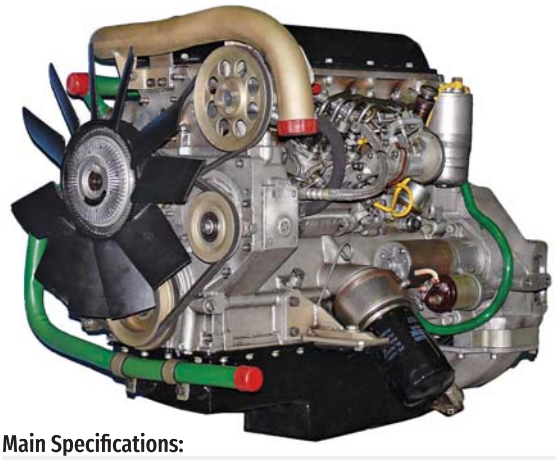
DIESEL ENGINE

Designed for use as a powerplant for UAZ, Gazel, Sobol automobiles.

DIMENSIONS:
700X520X700

RATED POWER:
66,2 (90) KW (H.P.)

WEIGHT:
170 KG



Main Specifications:

Rotation frequency	4200 min^{-1}
Bore	88 mm
Stroke	82 mm
Operating volume	2,0 l
Fuel specific consumption	16,2 g/kW-h

5TD-FMA-1

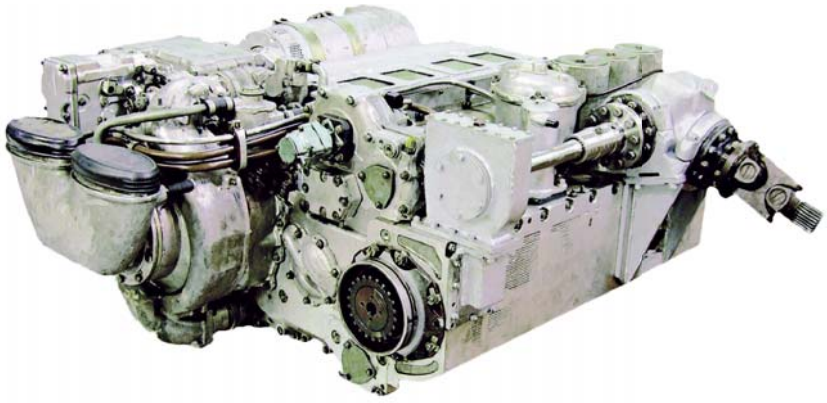
DIESEL ENGINE

Intended for modernization of T-72 tank without change of engine – transmission compartment volume, has the built-in tank fan drive.

DIMENSIONS:
1413X955X581

RATED POWER:
1050 H.P.

WEIGHT:
1080 KG



Main Specifications:

Rotation frequency	2850 min^{-1}
Number of cylinders	5
Bore	120 mm
Stroke	2x120 mm
Adaptation factor	1,2
Operating volume	13,6 l
Fuel specific consumption	165 g/e.h.p.-h

5TD-F

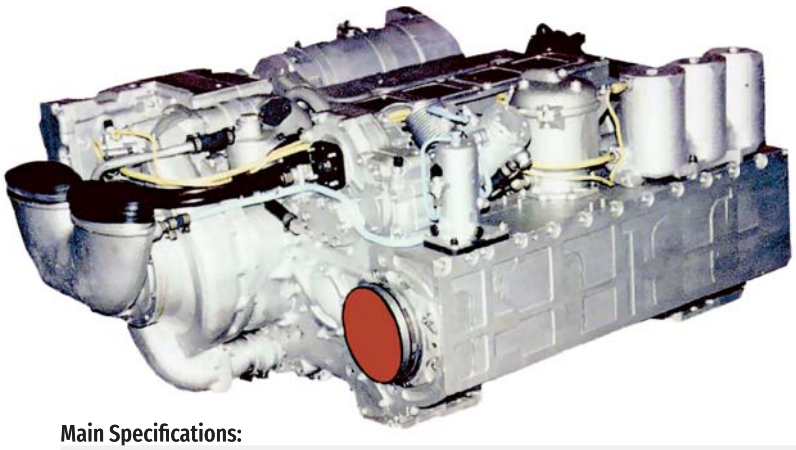
DIESEL ENGINE

Designed for use as a powerplant of the T-64 tank.

DIMENSIONS:
1413X955X581

RATED POWER:
515 (700) KW (H.P.)

WEIGHT:
1040 KG



Main Specifications:

Rotation frequency	2800 min^{-1}
Fuel specific consumption	178 g/e.h.p.-h
Bore	120 mm
Stroke	2x120 mm
Operating volume	13,6 l

6TD-1

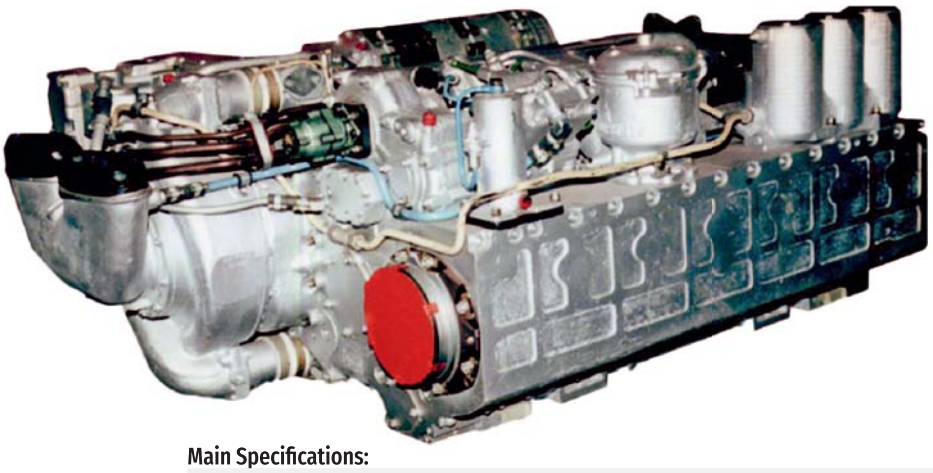
DIESEL ENGINE

Designed for use as a powerplant of the T-80UD tank. Can be used for upgrade of the T-72 tank.

DIMENSIONS:
1602X955X581

RATED POWER:
1000 H.P.

WEIGHT:
1180 KG



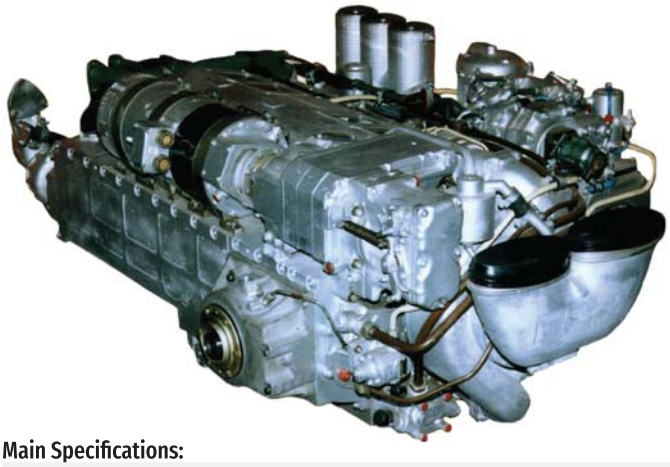
Main Specifications:

Rotation frequency	2800 min^{-1}
Adaptation factor	1,15
Fuel specific consumption	158 g/e.h.p.-h (g/kW-h)

6TD-1R

DIESEL ENGINE

Designed for use as a powerplant for armored recovery and repair vehicles BREM-84, and also for modernization of BREM on the basis of T-72 tanks. Equipped with a transmission for additional BREM operating elements.



DIMENSIONS:
1602X1093X581

RATED POWER:
735 (1000) KW (H.P.)

WEIGHT:
1210 KG

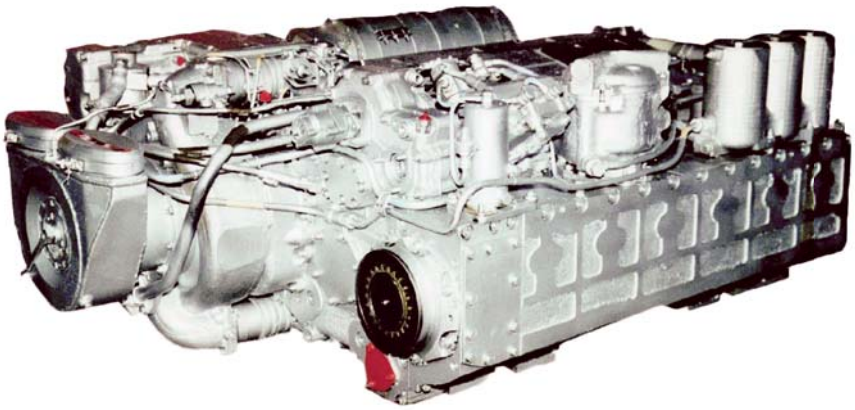
Main Specifications:

Rotation frequency	2800 min^{-1}
Fuel specific consumption	158 g/e.h.p.-h (g/kW-h)
Bore	120 mm
Stroke	2x120 mm
Operating volume	16,3 l

6TD-2E

DIESEL ENGINE

Designed for use as a powerplant of the Oplot main battle tank. BM «Oplot». Equipped with additional elements of KSUD tank automatic control system.



DIMENSIONS:
1602X955X581

RATED POWER:
1200 H.P.

WEIGHT:
1180 KG

Main Specifications:

Bore	120 mm
Stroke	2x120 mm
Number of cylinders	6
Operating volume	16,3 l
Fuel specific consumption	160 g/e.h.p.-h (g/kW-h)
Rotation frequency	2600 min^{-1}

6TD3

DIESEL ENGINE

6TD-3 engine is is one of the latest Ukrainian versions of diesel multifuel engines with the capacity 1400 h.p. It is an improved model of the engine for heavy armored vehicles.

DIMENSIONS:
1698X955X581

RATED POWER:
1400 KW

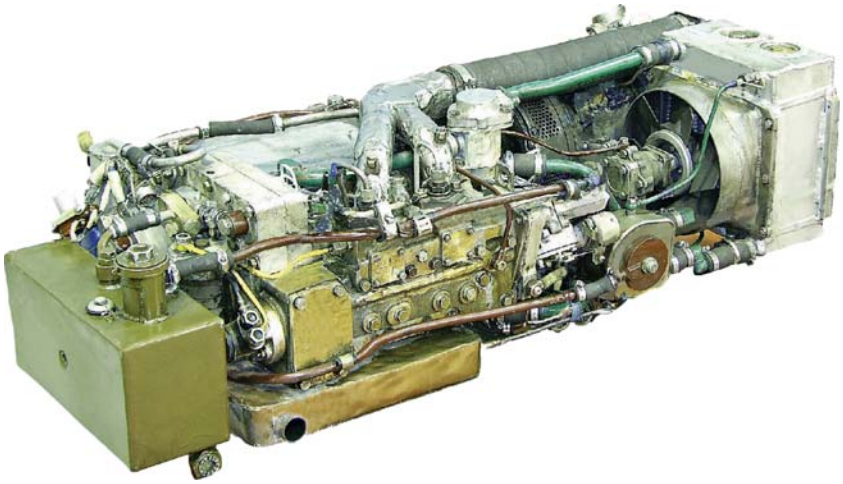
WEIGHT:
1210 KG

Main Specifications:

Number of cylinders	6
Operating volume	16,3 l
Fuel specific consumption	160 g/e.h.p.-h (g/kW-h)
Rotation frequency	2850 min^{-1}

EA10-1

POWER UNIT



The power unit serves as a source of electric power supply of a direct current for all the necessary works of military tracked vehicles in parking mode with the basic diesel engine off.

DIMENSIONS:
1300X495X315

RATED POWER:
10 KW

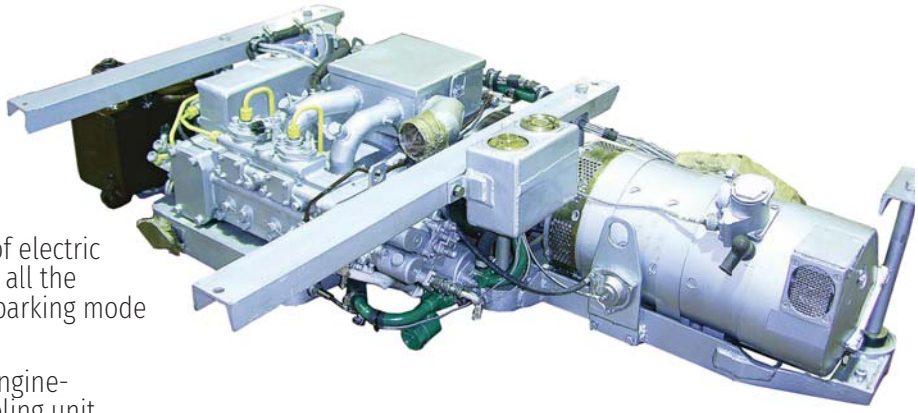
WEIGHT:
250 KG

Main Specifications:

Rated voltage	28,5 V
Fuel consumption	4,2 kg/h
Loss of oil on burn-out	0,09 kg

EA10-2

POWER UNIT



The power unit serves as a source of electric power supply of a direct current for all the necessary works of T-72UA1 tank in parking mode with the basic diesel engine off.

The power unit is mounted in the engine-transmission compartment. The cooling unit, starting control gear are installed in the armored compartment on the shelf over the caterpillar track.

DIMENSIONS:
1368X552X355

RATED POWER:
10 KW

WEIGHT:
250 KG

Main Specifications:

Rated voltage	28,5 V
Fuel consumption	4,2 kg/h
Loss of oil on burn-out	0,09 kg

EA10MSb

POWER UNIT

The power unit serves as a source of electric power supply of a direct current for all the necessary works of military tracked vehicles in parking mode with the basic diesel engine off.

Provides basic diesel engine start.

The power unit is mounted in the armored compartment.

DIMENSIONS:
1450X550X390

RATED POWER:
10 KW

WEIGHT:
560 KG

Main Specifications:

Rated voltage	28,5 V
Fuel consumption	4,2 kg/h
Loss of oil on burn-out	0,09 kg

ZASLON

ACTIVE PROTECTION SYSTEM

Designed to protect the stationary and moving facilities against anti-tank strike devices with a grazing and diving trajectory.

The ZASLON active protection system - which has no equals in the world:

- provides protection to main battle tanks, it can also be integrated with other armoured combat vehicles as well as being used to protect stationary installations
- has modular design
- capable to single out the targets
- autonomous, automatic and self-tested
- day-and-night, and all-weather operating.

Main Specifications:

Target Detection	radar
Protected Area	± 150-180°
Speed of defeated objects	
minimum speed	70 m/sec
maximum speed	more than 1200
Weight (depends on protection level)	from 50 to 130 kg
Power Consumption, maximum	0.2 kW
Readiness Time	01 min
Possibility to install on light moving facilities	available
Interference Immunity	available
Hidden Operation	high

DUPLET

ANTI TANDEM DYNAMIC ERA

Designed for protection from unitary and tandem cumulative threats, subcaliber amour piercing shells and “cannonball” type ammunition.

Main Specifications:

Protection type	Dynamic multifunctional
Reduction of the armor piercing capability of the unitary RPG grenades types PG-7V, PG-7VS, PG-7VM, PG-7VL, PG-9V, PG-9S and tandem grenades types PG-7VR, PG-7VLT, PG-29; anti-tank guided missiles with unitary and tandem warheads; cannonball ammunition	80-90%
Reduction of armor piercing capability of armor piercing feathered subcaliber shells	80-90%
Enhanced protection against B32 bullets calibers 7,62 mm, 12,7 mm, 14,5 mm.	Provided (for zones protected by DERA blocks)
Protection against tandem grenades of bi-caliber grenade launchers RPG-30 («Kruk»), RPG-32 («Khashim») and DP-64	Provided in complex with APS «Shershen» or «Zaslon»
Operational reliability	100%
Weight of 1m2 of protection	400-515 kg
Dynamic protection block structure	Cumulative protection elements KhSChKV-34P, KhSChKV-19, KhSChKV-19A; ballistic components; shock absorbers; container.

SHERSHEN

ACTIVE PROTECTION SYSTEM FOR LIGHT ARMORED VEHICLES

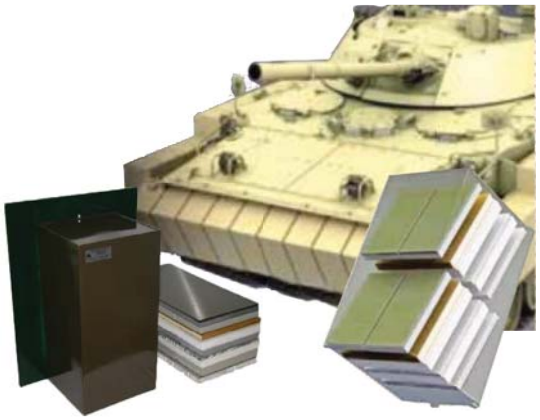
Active Protection System for light armored vehicles “SHERSHEN” is designed for pro-tection of stationary and moving carriers from anti-tank unitary and tandem kinetic and cumulative threats.

Perfomance:

Protection type	Dynamic, multifunctional
Protection from:	
▌Unitary anti-tank grenades	Protection probability 0,9
▌Tandem anti-tank grenades	Protection probability 0,9
▌All types of anti-tank guided missiles	Protection probability 0,8
▌Armor-piercing and cumulative artillery shells of medium caliber	Possible providing using the ammunition from APS “ZASLON”
Min. effective distance to the threat	20 m
Reaction time	0,001 – 0,006 s
Possibility to be combined with ERA	Can be combined with all ERA types
Detection and Designation range	1,2 – 2,5 m
Secrecy of function and jam immunity	High
Weight of one module with armor	Up to 50 kg.
Protection against tandem grenades of bi-caliber gre-nade launchers RPG-30 («Kruk») and RPG-32 («Khashim»)	Is effective in combination with ERA “RAKETKA” and “DUPLET”
Year of development	2012

RAKETKA

ANTI-TANDEM DYNAMIC ERA FOR LIGHT ARMORED VEHICLES



Anti-tandem DERA “RAKETKA” is designed to protect light armored vehicles from unitary and tandem anti-tank cumulative threats.

Perfomance:

Protection type	Dynamic, multifunctional
Reduction of the armor piercing capability of the unitary RPG grenades types PH-7V, PH-7VS, PH-7VM, PH-7VL, PH-9V, PH-9S and tandem grenades types PH-7VR, PH-7VLT, PH-29; anti-tank guided missiles with unitary and tandem warheads; cannonball ammunition	Provided with min. probability 0,8 (for zones protected by DERA)
Enhanced protection against small caliber armor piercing shells	Provided (for zones protected by DERA)
Enhanced protection against B32 bullets calibers 7,62 mm, 12,7 mm, 14,5 mm.	Provided (for zones protected by DERA)
Protection against tandem grenades of bi-caliber grenade launchers RPG-30 («Kruk»), RPG-32 («Khashim»)	Provided in complex with APS «Shershen» or «Zaslon»
Operational reliability	100 %
Weight of 1 m² protection	300 – 350 kg
Dynamic protection block structure	Cumulative protection elements KhSChKV-34, KhSChKV-34A, KhSChKV-19A; ballistic components; shock absorbers; container.

NOZH-L

DYNAMIC EXPLOSIVE REACTIVE ARMOR FOR LIGHT CATEGORY ARMORED VEHICLES

DERA «NOZH-L» is designed for protection of armored vehicles of light weight category from unitary cumulative anti-tank threats.

Perfomance:

Protection type	Dynamic, multifunctional
Reduction of the armor piercing capability of the unitary RPG grenades types PG-7V, PG-7VC, PG-7VM, PG-7VL, PG-9V, PG-9C and tandem grenades types PG-7VR, PG-7VLT, PG-29; anti-tank guided missiles with unitary and tandem warheads; cannonball ammunition	Provided with probability min. 0,8 (for zones protected by DERA blocks)
Armor penetration with grenades	Eliminated
Enhanced protection from the bullets :	Provided (for zones protected by DERA blocks) at the following distances:
▮ caliber 12,7 mm	250 m
▮ caliber 7,62 mm	50 m
Weight of 1m² of protection	200 – 250 kg.
Dynamic protection block structure	Cumulative protection elements KhSChKV-34, KhSChKV-19A; ballistic components; shock absorbers; container.
Enhanced protection against small caliber amour-piercing shells	Provided (for zones protected by DERA blocks)
Enhanced protection against tandem cumulative threats	Provided partially
Protection against tandem grenades of bi-caliber grenade launchers RPG-30 («Kruk»), RPG-32 («Khashim»)	Provided in complex with APS «Shershen» or «Zaslon»

Acoustic

BALLISTIC & ACOUSTIC PROTECTION OF WHEELED ARMORED VEHICLES

Ballistic acoustic protection is designed to enhance Wheeled Combat Vehilces protection against armor pircing incendiary bullets and acostic overload of the crew and soldiers.

Perfomance:

Manufacturing start	2007
Protection level against B-32 bullets:	Effective at the following distances:
▮ caliber 7,62 mm	150-200 m.
▮ caliber 12,7 mm	300-350 m.
Enhanced protection of the crew against the secondary splinter stream	Provided
Reduced acoustic load on the crew inside the vehicle	2-3 times
Weight of 1m 2 of protection	32-50 kg
Reduced combat loss of hardware and crew	Provided
Protection structure	1. SPT steel screen. 2. Air gap. 3. Main armor. 4. Internal layer (kevlar, styrofoam)

F-3 «FANTOM»

VEHICLE-CARRIED ANTI-TANK MISSILE SYSTEM

- F-3 system is a new efficient protection of armoured vehicles, it provides sham range signals to the enemy range finders.

This will cause:

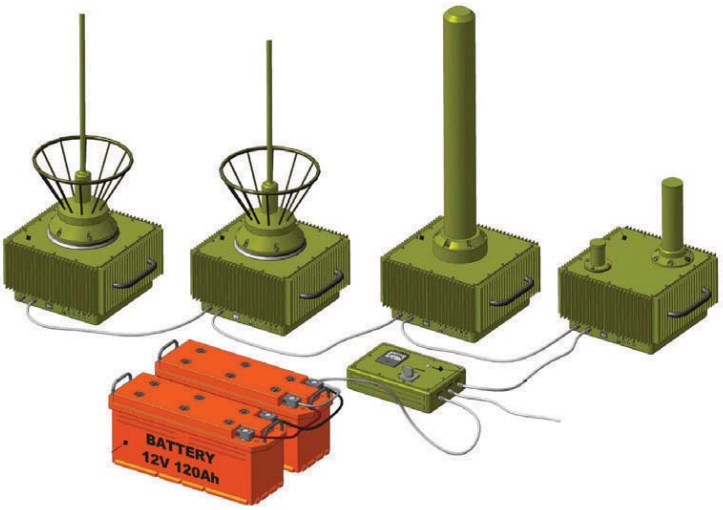
- Amplitude-time selection-based fire control system as in T-80, T-84, T-90, etc. tanks cannot determine actual range to the target, consequently, hit probability is reduced almost to zero level.
- The selection-based fire control system as in «Abrams», «Leclerc», «Leopard», etc. tanks cannot exactly determine actual range to the target, consequently, hit probability is reduced and shot preparation time increased because real range must be selected.
- Basic version of F-3 unit is manufactured with formed sham range signal exceeding real value by 400±10 m. At customer's choice we can install any value of generated error in excess of real value. Application: F-3 unit may be used to protect any objects of army, navy, air force, as well as engineering fortifi cations. F-3 unit is now being adopted in Ukrainian armed forces. F-3 unit opposes traditional rangefinding methods and has no counterparts anywhere in the world in respect of performance.

Main Specifications:

Overall dimensions, mm	260x172x131
Weight within armoured cover, max., kg	12,5
Operating temperature range, °C	-40 to +60

GARANT

RADIO CONTROL LINKS SUPPRESSION SYSTEM



"Garant" product is designed for radio suppression of receiving sections of various radio technical facilities, radio communication channels of stationary, mobile and portable radio stations, radio telephones of cellular communication systems as well as for protection of mobile facilities (columns on the move and single combat and transport facilities) by preventing a radiocontrolled explosion of explosive devices (mines, fougasses et al.).

The task is accomplished by radiating a hampering radio signal over the whole frequency range where the use of the mentioned control radio links is possible.

The use of this product allowed to neutralize several attempts of a radio-controlled explosion of an automobile column on the move (explosions occurred after the column transit of the spot of radio-controlled fougasse laying beyond the boundaries of the radio suppression zone).

Main Specifications:

Frequency range of noice radiation, MHz	20-2700
Type of noise	wide-vand barrage
Summary integral output power of noise, W	230
Radio suppression distance, m	750-500
Consumed power, W, max.	900
Supply voltage, V	Oct-36
Ambient temperature, ˚C	from '-40 to +60

Brief Description of System "Garant" system consists of 4 BPRL-1, -2, -3, -4 radio suppression units. Each of the BflPJ1-1, -2, -3 units consists of 4 jamming transmitters and one high-efficiency 4-lead wide-band antenna with the circular radiation pattern in the horizontal plane.

Serviceability of "Garant" system in the wide range of the supply voltage from 10 to 36 V allows to use it on the transport facilities which have the electrical systems with the rated voltage of 12 V and 24 V.

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Ukrainian Defence Industry

BTR-3E1 Integrated Crew Training Simulator

Main Specifications:

Ambient operating temperature	+5...+35 °C
Temperature during transportation	-25...+40 °C
Relative humidity at 25 °C, without condensing	no more 80%
Endurance	no more 4 h
Time of interval	no less 1 h
Readiness time	no more 30 min
Operation guaranty period 1 year	
Voltage, AC	
Alternating current network	380/50, 220/50 V/Hz
Average (peek) power AC	no more 6 (12) kW
Weight	no more 2200 kg

BTR-4 Integrated Crew Training Simulator

Main Specifications:

Ambient operating temperature	+5 ... +35 °C
Temperature during transportation	-25 ... +40 °C
Relative humidity at 25 °C, without condensing	Not more 80%
Endurance	Not more 4 h
Time of interval	Not less 1 h
Readiness time	Not more 30 min
Operation guaranty period 1 year	
Voltage, AC	380/50, 220/50 V/Hz
Average (peek) power AC	12 (24) KW
Weight	3100 kg

BTR-80 Integrated Crew Training Simulator

Integrated simulator of BTR-80 armored personnel carrier is designed for solving tasks of the combat training program of units armed with BTR-80 armored personnel carrier and provides:
a) individual training of crew members: studying of BTR-80 arrangement and operations procedure at preparation of weapons and equipment for intended use, formation of target reconnaissance skills, firing from BRT-80 armament day and night, in various weather conditions, and on different terrains;
b) training of driver mechanics of APC driving to the fullest context of Combat vehicle driving course;
c) crew weapons training to the fullest context of Firing course, APC crew coordination;
d) tactical training and crew combat coordination in conditions close to combat ones including conditions of two-sided battle;
e) preparation of mechanized units to tactical training and field exercises with use of 3D models of terrain areas where exercise conducting is planned;
f) raising intensity and effectiveness of combat training;
g) maintaining high level of effectiveness of mechanized units within the training period.

Main Specifications:

Minimum necessary area for placement	20 m2
Operation readiness after turn-on	Maximum 5 min
Duration of continuous work	Minimum 12 hours
Electric supply:	
▌voltage	220 V ±10%
▌frequency	50 Hz ±1
High working and limit temperature	+35 °C
Low working temperature	+5 °C
Maintenance	Walk-around inspection, daily maintenance, 1st maintenance (once every 6 month), 2nd maintenance (once a year)
Operational liquid	Mineral oil in gear motors of dynamic platform

BMP-1 Integrated Crew Training Simulator

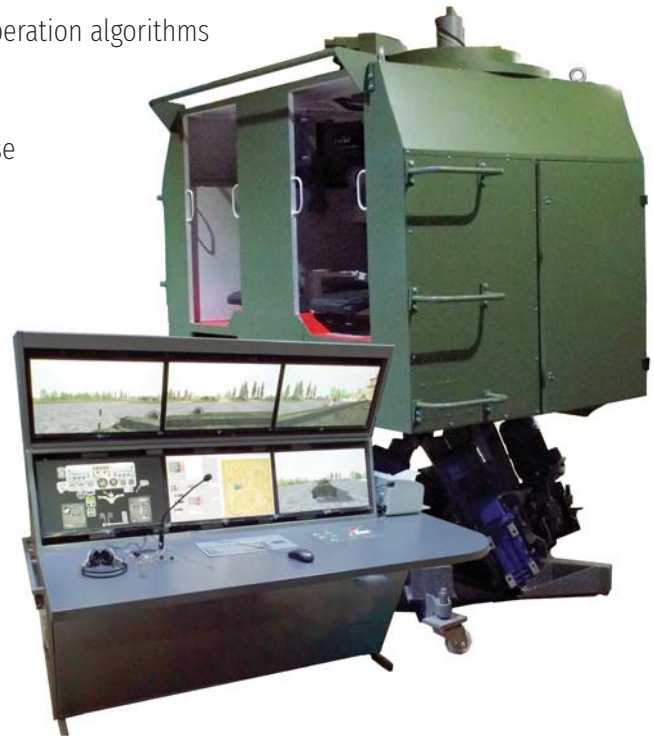
The simulator enables drill of the following tasks:
- studying common equipment, positioning of devices and tools of controls of the vehicle;
- mastering the tools and controls of the vehicle;
- drilling the pre-start and start operations of the car in winter and summer;
- drilling the movement techniques off the spot, switching transmission, turns, all types of brakes;
- driving the vehicle in any landscape of the 3D training ground with option of appropriate engine mode;
- drilling the techniques to negotiate natural and man-made obstacles;
- working out the fire control skills.

Main Specifications:

Total weight	3,95 t
Consumed power	12 kW
Time of readiness	5 min
Endurance	10 h
Drive charge	700-900 kgs
Seats	3 men.
Instructor seat	1 men.
Weight of the cabin	1,5 t

BMP-2 Integrated Crew Training Simulator

Basic characteristics:
- Compliance of compartment interior with equipment operation algorithms
- High quality of visualization
- 3-D models of tank training area, directrix, tactic field
- Six-degree dynamic platforms
- Full scope of exercises of Combat Vehicles Driving Course
- Full scope of exercises of Firing Course
- Wide range of terms of exercises and trainings
- Fairness of assessment of trainees actions
- Results documentation



Main Specifications:

Quantity of simultaneously trained people	3 (driver mechanic, gunner, commander)
Operation readiness after turn-on	Max 5 min
Duration of continuous work	Min 12 hours
Electric supply:	
▌voltage	220 V ±10%
▌frequency	50 Hz ±1
Maximum consumed power	30 kW
Range of working temperatures	from +5 to +40 Deg. C
Failure time	Min 500 hours
Assigned resource	Min 8 years
Warranty period	1 year

T-64 “Bulat” Integrated Crew Training Simulator

The use of the tank simulator for the crew training with no quality training drawbacks as compared to training procedures on the tank directly provides the following merits:

- Form efficient skills in the trainee’s action;
- Prevent accidents in the course of the tank crew training;
- Exclude damage of fighting vehicles at wrong trainee’s actions; due to saving the fuel, service life of fighting vehicles and ammunition;
- Carry out the training both for the whole crew and individually for a driver, a gunner and commander on the individual base.

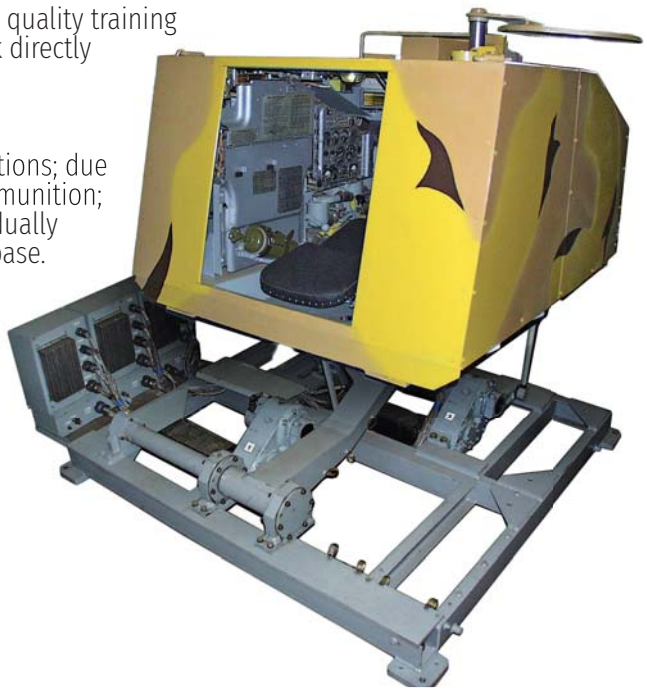
Main Specifications:

Total weight	4 t
Consumed power	12 kW
Time of readiness	5 min
Endurance	10 h
Drive charge	700-900 kgs
Seats	3 men.
Instructor seat	1 men.
Weight of the cabin	1,5 t

T-80 CREW TRAINING SIMULATOR

The use of the tank simulator for the crew training with no quality training drawbacks as compared to training procedures on the tank directly provides the following merits:

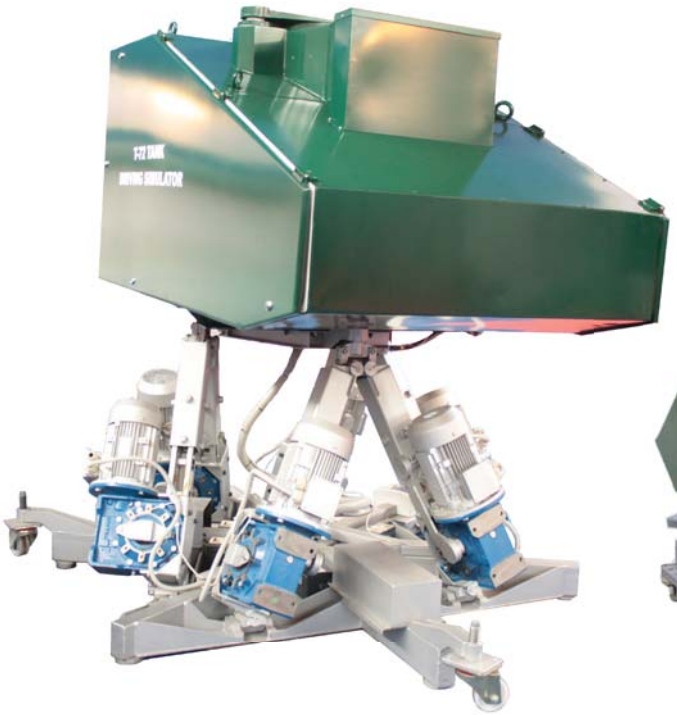
- Form efficient skills in the trainee’s action;
- Prevent accidents in the course of the tank crew training;
- Exclude damage of fighting vehicles at wrong trainee’s actions; due to saving the fuel, service life of fighting vehicles and ammunition;
- Carry out the training both for the whole crew and individually for a driver, a gunner and commander on the individual base.



Main Specifications:

Total weight	4 t
Consumed power	12 kW
Time of readiness	5 min
Endurance	10 h
Drive charge	700-900 kgs
Seats	3 men.
Instructor seat	1 men.
Weight of the cabin	1 t

T-72 Integrated Crew Training Simulator



Main characteristics:
- Structural adequacy of control compartment and combat compartment
- Functional adequacy
- High quality of visualization
- 3-D models of mean line of fire, tank training area, tactical field
- 6-degree dynamic platform
- Full scope of exercises of the Driving Course
- Full scope of Firing Course
- Wide range of terms of exercises and trainings
- Fairness of assessment of trainees actions
- Results documentation

Main Specifications:

Quantity of simultaneously trained people	3 (driver mechanic, gunner, commander)
Type of room	Classroom
Operation readiness after turn-on	Maximum 5 min
Duration of continuous work	Minimum 12 hours
Electric supply:	
▌voltage	220 V ±10%
▌frequency	50 Hz ±1
Range of working temperatures	from +5 °C to +40 °C
Failure time	Minimum 500 hours
Assigned resource	8 years
Warranty period	1 year

HEAVY MECHANIZED BRIDGES AND PONTOON BRIDGES

Characteristics of a floating bridge					
Carrying capacity of the bridge, t	Width of the carriageway of the bridge, m	Bridge length, m	Number of calculations for navigating the bridge, people	Number of calculations for navigating the bridge, drivers	Time, min
60	6,50	227	102	34	30
20	3,29	382	102	34	50

Military engineering equipment, Special equipment

Basic tactical and technical characteristics of TMM-2	
Type of vehicle	Bridgelayer on rigid supports
Base chassis	Truck KrAZ-63221
Package contents	
· Vehicles with spans	4
· intermediate supports	3
Bridge capacity	
· by tracked load	60 t
· by wheel load	11 ton per axel
Length of the single-span bridge	10 m
Length of the bridge of a complete set	40 m
Width of driveway	3.8 m
Width of track	1.5 m
Space between tracks	0.8 m
The maximum permissible depth of a water obstacle	3 m
The minimum permissible depth of a water obstacle	1.6 m (if the bridge in two, three or four flights)
Permissible flow velocity at bridging	Up to 2.5 m/sec.
Entrance angle to the bridge	Up to 47 degrees
Departure angle from the bridge	Up to 24 degrees
Permissible terrain inclination in the area of bridging	
· longitudinal	Up to 10 degrees
· cross	Up to 6 degrees
Crew for the bridging	4 persons
Time for four-span bridging	72 min
Permissible load speed	
· Tracked	15 km/h
· wheeled	20-25 km/h

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